

MENSCHEN FÜR MENSCHEN (MfM)

ETHIOPIA

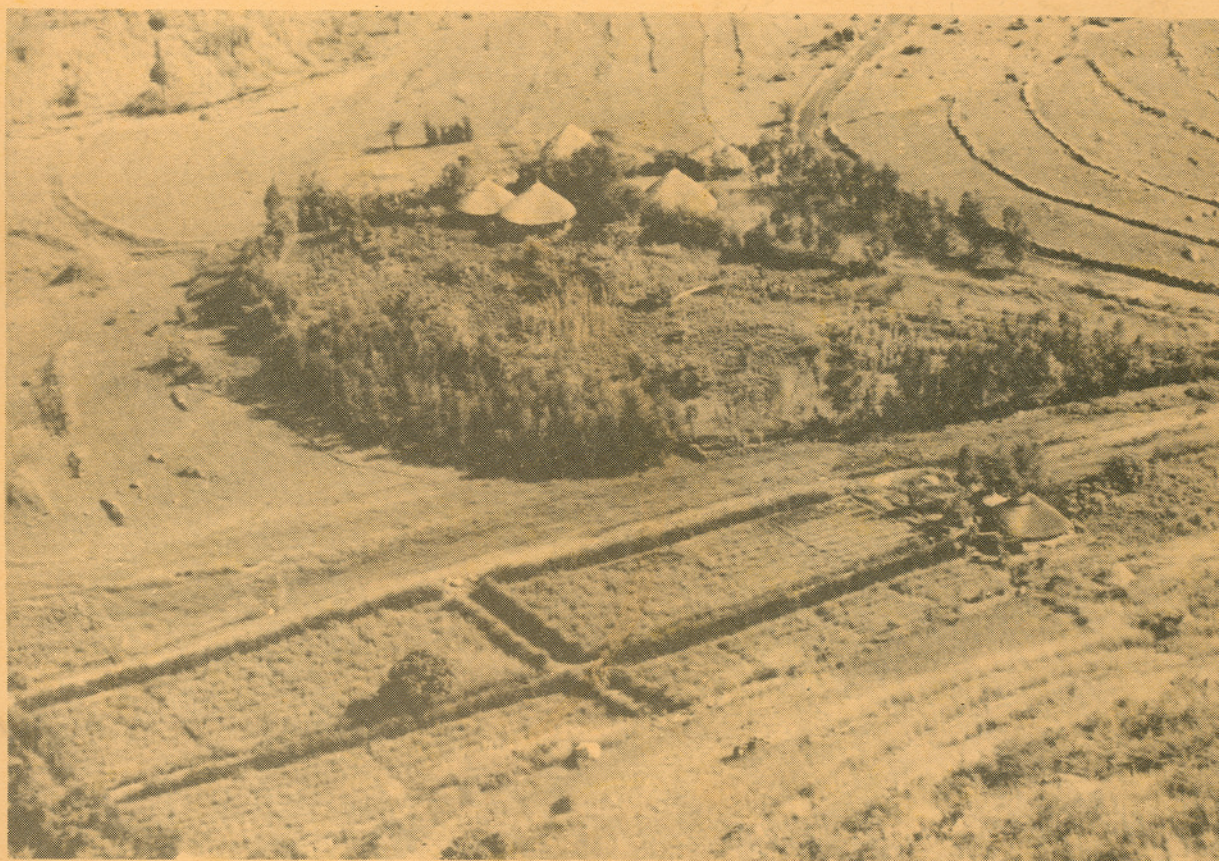
NORTHERN SHEWA ADMINISTRATIVE ZONE

PROGRAMME DOCUMENT

MERHABETE

INTEGRATED CONSERVATION AND DEVELOPMENT PROGRAMME (ICDP)

FIRST 5-YEAR PHASE



DECEMBER 1987

PREPARED ON BEHALF OF THE  
"MENSCHEN FÜR MENSCHEN" FOUNDATION  
AND THE MINISTRY OF AGRICULTURE  
BY HANS HURNI  
GEOGRAPHY INSTITUTE, UNIVERSITY OF BERNE



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### List of Abbreviations (With Referred Paragraph Numbers)

ARDD	Animal Resources Development Department of Zonal MoA (2.26; 3.09)
CFSCDD	Community Forests and Soil Conservation Development Department of MoA (1985-) (1.08)
CPADD	Cooperatives' Promotion and Agricultural Development Department of Zonal MoA (2.26; 3.07)
CSO	Central Statistical Office (1.01)
DA	Development Agent (1.08; 2.02; 2.07; 2.12; 2.14; 2.18; 2.20; 2.26; 2.27; 2.29; 3.03; 3.04; 3.05; 3.06; 3.07; 3.09; 3.10; 3.11; 3.12; 3.13; 3.14; 3.19; 3.20; 3.22; 4.05; 5.01)
EEC	European Economic Community (1.10; 2.05-2.08; 2.18; 2.21; 2.25; 2.32; 3.01; 3.02; 3.10; 3.25; 5.01)
EMA	Ethiopian Mapping Agency (1.01)
FAO	Food and Agriculture Organization of the UN (2.02)
HA	Home Agent (2.19; 2.26; 2.27; 2.29; 3.14; 3.16; 3.19; 3.20; 3.22; 4.05)
ICDP	Integrated Conservation and Development Programme for Merhabete, Northern Shewa Administrative Zone (Programme Summary see p. v)
LUPRD	Land Use Planning and Regulatory Department of MoA (2.02)
MfM	"Menschen fuer Menschen" Foundation (all document, particularly 2.34-2.37; 3.01; 3.10-3.13; 3.19; 3.23-3.27)
MoA	Ministry of Agriculture (all document, particularly 2.34; 3.01; 3.02; 3.15; 3.17; 3.18; 3.25; 3.26; 5.01)
MoE	Ministry of Education (2.23; 2.34; 3.12)
MoPH	Ministry of Public Health (2.22; 2.34; 3.11)
MPCO	Merhabete Programme Coordination Office (2.30; 2.34; 2.36; 2.37; 3.01-3.13; 3.15-3.17; 3.20-3.26; 5.01)
M&E	Monitoring and Evaluation (2.10; 2.34; 3.24)
NRCDD	Natural Resources Conservation and Development Department of Zonal MoA (2.24; 2.26; 3.03-3.07; 3.09; 3.13)
NWRC	National Water Resources Commission (2.24; 2.34)
ONCFER	Office of the National Committee for Foreign Economic Relations (2.30; 2.37; 3.27)
PA	Peasant Association (1.08; 2.08; 2.14-2.16; 2.22; 5.01)
PADEP	Peasant Agricultural Development Programme (2.02; 2.03)
PC	Producers' Cooperative (1.08)
PDRE	People's Democratic Republic of Ethiopia (2.01; 2.05; 3.01; 3.20; 3.23; 4.01; 5.01)
RIDD	Rural Infrastructure Development Department of Zonal MoA (2.16; 2.26; 3.05; 3.06; 3.10; 3.19)
RWT	Rural Women's Team (3.08)
SC	Service Cooperative (1.08; 2.02; 2.08; 2.12; 2.14; 2.15; 2.17; 2.18-2.20; 2.22; 2.27; 2.31; 3.10-3.13; 5.01)
SWCD	Soil and Water Conservation Department (1981-1985) (1.08)
T&V	Training and visit (2.14; 2.29; 3.08)
WFP	World Food Programme (1.08; 4.05)

### Weights and Measures

ha	Hectare (100m x100m = 10,000 m <sup>2</sup> )
qt	Quintal (1 qt = 100 kg)

Explanation of Amharic Terms and Names

Alem Ketema	Capital of Merhabete (cf. Annex 1 and 2)
Awraja	District; administrative region between "Kifle Hager" (= 14 former provinces of Ethiopia) and Wereda (see below); eg "Merhabete Awraja"
Merhabete	Name of district (cf. Annex 1 and 2)
Wereda	Sub-district; lowest administrative division; in Merhabete there are 6 Weredas (cf. Annex 1 and 2)

Cover Photo:

Forest nursery in conserved rural environment with peasant farms near Alem Ketema in Merhabete. Such sample areas form nuclei of conservation-based rural development in Merhabete to be implemented with the programme documented here. H. Hurni, 25 Sep. 1987

First reprint: March 1988



Northern Shewa Administrative Zone - Ethiopia  
Merhabete  
Integrated Conservation and Development Programme (ICDP)

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Northern Shewa Administrative Zone - Ethiopia  
Merhabete  
Integrated Conservation and Development Programme (ICDP)

## SUMMARY

### Programme Overview:

TITLE: MERHABETE INTEGRATED CONSERVATION AND DEVELOPMENT PROGRAMME - PHASE I

DURATION: 5 YEARS (1.1.1988 - 31.12.1992)

PRIMARY FUNCTION: CONSERVATION-BASED RURAL DEVELOPMENT

SECTOR: OFFICE OF THE NATIONAL COMMITTEE FOR FOREIGN ECONOMIC RELATIONS

GOVERNMENT IMPLEMENTING AGENCY: MINISTRY OF AGRICULTURE

EXECUTING AGENCY: MINISTRY OF AGRICULTURE AND MERHABETE PROGRAMME COORDINATION OFFICE OF "MENSCHEN FÜR MENSCHEN"

ESTIMATED COSTS: BIRR 28.0 MILLION

(1) COMMUNITY-BASED SUB-PROGRAMME:	BIRR	11.7 MILLION
(2) REGIONAL SUB-PROGRAMME:	BIRR	3.2 MILLION
(3) INSTITUTION SUB-PROGRAMME:	BIRR	12.1 MILLION
(4) M&E SUB-PROGRAMME:	BIRR	1.0 MILLION

GOVERNMENT INPUTS: BIRR 2.5 MILLION

INPUTS OF "MENSCHEN FÜR MENSCHEN": BIRR 25.5 MILLION

### Programme Area:

Merhabete is a region in Northern Shewa Administrative Zone (see map: Annex 2) with high population density, dominant drought-prone lower high-land agroclimatic zones, a high percentage of peasants living at subsistence level, and very low infrastructural development. However, the potential for conservation-based development is high, considering improved water retention, reafforestation, social infrastructure and irrigation.



**Programme Description:**

The Programme addresses priorities established by PDRE for the agricultural sector and focusses on conservation-based agricultural and social infrastructure development. The Programme consists of (1) community-based conservation, rehabilitation, agricultural and social infrastructure development; (2) regional social infrastructure development; (3) institution support, and (4) monitoring and evaluation. The main strategy will be awareness creation for land degradation and organization of campaigns for land rehabilitation based on agreements with local communities represented by Peasant Associations and Service Cooperatives. In exchange of the required labour inputs, the Programme shall offer the contracted communities social infrastructure and agricultural development such as water supply, roof catchments (cisterns), agricultural inputs, rural women development support, livestock support; and on a regional scale, clinics, schools and SC development support. Much emphasis will be given to strengthening manpower at the Merhabete Agricultural Office, and to closely monitor and regularly evaluate the implementation of the Programme.

A second phase of the Programme will be envisaged after 5 years if the means of the donor agency and the performance of the present programme allow.

Parallel to this Programme, an EEC-supported "North Shewa Reclamation and Development Project" with activities in three Awrajas including Merhabete shall be implemented. EEC components for Merhabete would include rural roads construction (about 6 million Birr), irrigation development (about 1.5 million Birr), piloting of land use rationalisation, field trial and demonstration of agricultural improvements (about 2 million Birr), and microprojects (about 0.7 million Birr).

**Benefits and Risks:**

The main benefits in the Programme area would be: (a) prevention of further land degradation and support of ecological rehabilitation; (b) increase in production through water conservation, agricultural inputs, fuelwood plantation and livestock management; (c) improvement of health and hygiene, and (d) better access, infrastructure and education for economic development and for famine relief. The Programme includes provisions for an expeditious start, strong institution building, preparation of annual work plans and a separate monitoring, studies and evaluation sub-programme thereby minimizing the risk.

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## I. THE PROGRAMME AREA

**1.01 Area and Population:** The programme area comprises Merhabete in Northern Shewa Administrative Zone (Annex 1). The neighbouring regions of Merhabete are Gojam to the West, Wello to the North, Menz & Gishe to the East, Tegulet & Bulga to the Southeast, and Selale to the South (see map, Annex 2). Merhabete is linked to outside regions only by one all-weather road through Selale. Merhabete is delimited by two tributaries of the Blue Nile River, namely the Jema River in the South and the Beto River in the North. A further deep dissection through the area is formed by the Wenchit and Jara rivers. Merhabete has an altitudinal range of 1050 m to 2650 m asl, its total area comprises about 363'000 hectares according to own boundary delimitations on EMA 1:250'000 map sheets based on information obtained from Merhabete officials (MoA statistics: 230'000 ha, CSO: 460'000 ha). The total population of Merhabete is estimated to be over 300'000 people in 1987 (CSO statistics of 1984: 271'000), of which 96 % are rural peasants (Annex 3).

TABLE 1.1

### AREA AND POPULATION (1987)

	MERHABETE	ETHIOPIA
AREA (HA)	363'000	122'000'000
% OF ETHIOPIA	0.297	100
POPULATION	304'000 (1983: 271'471)	47'000'000
% OF ETHIOPIA	0.647 %	100 %
POPULATION DENSITY		
PER KM <sup>2</sup>	83.7 (1983: 74.7)	38.5
LIVESTOCK	294'940 1)	AB. 70 MILLION
LIVESTOCK DENSITY		
PER KM <sup>2</sup>	81.3	57.4
CULTIVATED AREA	96'500 HA	10 MILLION HA
% OF TOTAL AREA	26.6 %	8.2 %

#### 1) ANNEX 4

**1.02 Geology and Soils:** The horizontally layered basalt Trap series, the dominant geologic feature of the Ethiopian highlands, form the surface rocks of only about 5 % of Merhabete (all Dega parts above 2500 m asl, see Annex 2). Below, basalt series are intermittent with limestone/gypsic layers, at altitudes between 1700 m and 2500 m asl. Sandstones dominate the areas below about 1700 m asl. Soils are derived from the geologic underground (Annex 5). As a consequence, about 30 % of the Awraja is covered by sandy soils (Arenosols), especially the undulating hills and plains on the bottom of the deep valleys of Beto, Jara, Wenchit, and Jema rivers. Higher up, brown soils of variable organic matter content and degradation



dominate (Rendzinas, Phaeozems, Cambisols, about 57 %). The high plateaus above 2600 m asl are covered with black cotton soils (Vertisols, 13 %). 87 % of all soils in the Awraja are less than 50 cm deep, which poses a serious constraint to successful terrace development (Annex 6).

**1.03 Climate:** The climatic conditions of Merhabete differ widely according to altitude (temperature variations) and rainfall. Rainfall is known only for highland stations (Annex 7). In Alem Ketema, the capital of Merhabete, 1146 mm annual rainfall were recorded on the average. Rainfall is unimodal, with highest amounts in July and August, and with increasing amounts from January to July and decreasing from August to October. No rains are normally recorded in November and December. The lowland areas below 2000 m asl, which comprise 73 % of Merhabete, receive much lower amounts of rainfall; the valley bottoms probably only about 600 mm according to observations of natural vegetation. The intramontane location of the Merhabete valleys lead to such reduced amounts as compared to the surrounding highlands. According to rainfall patterns, the length of the growing period also varies, the average being around 100 days per year in Merhabete.

**1.04 Land Degradation and Rehabilitation Potential:** Degradation effects due to century-old cultivation of slopes and overgrazing of steep hills are widespread especially along the sides of the main valleys, but also on top of the relatively flat highland plateaus. This has led to reduced water holding capacity of the soils and decreasing yields. The potential for rehabilitation, however, is considerable, if the deeply weathered sandy soils are taken into account. On the high plateaus, rehabilitation of the black cotton soils may be more difficult, although their degradation is less advanced than on the slopes. Inputs in the form of soil conservation, water conservation in the lowlands, water drainage on the black highland soils, afforestation of steep escarpment soils, area closures and cut and carry systems for grass utilization are indispensable for any agricultural development programme. Ecological rehabilitation, as a consequence, is the key input in the present programme.

**1.05 Water Resources and Irrigation Potential:** Water for home and livestock consumption has been mentioned as one of the major concerns of Merhabete. Virtually no springs were developed in the past (except for some activities of the Baptist mission in Mida Wereda in 1987). Spring development and roof catchments must be the major input for water resource utilization. About 250 community water supply systems (springs, wells, hand-pumps) should be developed. The irrigation potential of Merhabete is highest on the gently sloping valley bottoms of the major rivers crossing or bordering the area. A total potential of at least 10'000 ha irrigable land exists in those lowland areas. River diversion, however, will be a difficult task and has to be well planned and engineered. Apart from the major rivers, small-scale earth microdams of up to 10'000 m<sup>3</sup> reservoir capacity offer a further potential for minor irrigation projects at higher altitudes, between 1500-2000 m asl, if soil texture allows such constructions.

**1.06 Farming Systems and Land Holdings:** Mixed farming is the most common farming system in Merhabete. Average land holdings are estimated to be 1.61 ha of cultivated land per family (Annex 8). This in the Ethiopian context is comparatively large, but must be seen as a consequence of cli-

matic marginality and the need for minimizing risks. Agricultural practices are adapted to the environmental and socio-economic conditions in which the peasants live, but could be considerably improved if respective services and inputs could be provided on a permanent and secure basis.

**1.07 Crop Production:** Sorghum is the major crop grown in Merhabete (1987: 65%), followed by tef (*eragrostis tef*, 16 %), barley (7 %), pulses (5 %), wheat (4 %) and maize (3 %). Normal year cropping patterns are indicated in Annex 9, showing a higher percentage of tef, which is mainly sold as cash crop. A normal year production of the whole Merhabete area, based on average yields of about 8-12 quintals (1 qt=100 kg) per hectare (Annex 10) and the specific 1987 cropping pattern (Annex 11), amounts to about 850'000 qt (Annex 12). This is just enough for subsistence and a modest cash income to cover essential expenditures. Taking a relatively broad standard deviation from such mean figures, one can conclude that about one third of the Merhabete population is living at absolute poverty levels. In years of rainfall irregularities like in 1984 and again in 1987, production is likely to fall to about 50 % of normal amounts (cf Hurni, 1987). Without massive inputs of food relief, such as the Baptist mission's distribution of about 1000 t per month in 1985, a vast proportion of the population would not survive on their own production in drought years.

**1.08 Agricultural Services:** The peasants of Merhabete have been formed into 170 Peasant Associations (PAs) with 53'000 members (Annex 13). PAs are the nucleus for community approaches and represent the basic democratic bodies of the political system. Service Cooperatives (SCs), designed to group 4-5 PAs together and to stimulate marketing and agricultural development, were formed also in Merhabete and number 45 SCs. However, only 2 SCs could be registered (1984, see Annex 13). Development Agents (DAs) of the Ministry of Agriculture should be located at SC level and provide consultation for peasants in the member PAs of the SC. In Merhabete, however, only 4 DAs are assigned, so that the DA:peasant ratio is 1:8'827. In addition, 7 Producer's Cooperatives (PC's) were organized so far. The MoA budget is relatively low (120'000 EB capital and 210'000 EB recurrent in 1983/84), the staffing is insufficient for effective development (Annex 14), and the infrastructure in the Alem Ketema MoA office is modest (Annex 15). The inputs distribution of fertilizer was around 200 qt per year (or 0.3 kg per peasant on the average), and the pesticide inputs 0.06 kg per peasant. Both are insignificant amounts to increase the overall production of Merhabete (Annex 16). In the 6 years between 1978 and 1983, soil conservation activities were implemented by the WFP through the SWCD (now CFSCDD), mainly along the roads in the highlands and in the surrounding of towns (Annex 17). Compared with the need for conservation and reafforestation, only a small fraction of estimated 5 % of the land in need of soil conservation was treated so far.

**1.09 Infrastructure:** Only one all-weather (gravel) road connects Merhabete (Alem Ketema capital and Fitra Wereda capital) with Central Shewa Region (about 100 km to the main Shewa-Gojam Road). For locations see Annex 2. A rural road project of MoA, from Alem Ketema to the two Wereda capitals Rema and Gundo Meskel has been initiated. About 15 km out of 69 km are completed so far. Three major bridges cross the three dominant rivers (Jema, Wenchit and Jara Rivers), out of which the Wenchit bridge has been damaged in 1985 and awaits repair. All-weather roads to the remaining Wereda capitals are included in the five-year development plan of



the Merhabete Awraja administration, and an additional road link to Selale is proposed (Annex 18). Other infrastructural developments like clinics, spring developments, schools, deep water wells and feeder roads are targeted, but await support for implementation.

**1.10 The Target Group:** The community-based sub-programme will be directly addressing all peasants through their PAs and SCs in Merhabete. According to the policy of MoA, one DA will be assigned to each SC, to give a DA:farmer ratio of 1:1300. The DA will receive training and technical support for conservation-based social infrastructural and agricultural development projects selected from a series of options by the peasant communities themselves. The regional sub-programme shall also include inhabitants of the major towns and support their initiatives in conservation-based fuelwood development and primary health care through water supply projects. Rural access, seen as major tool for better communication both in case of emergency as well as in case of marketing, will be implemented by the EEC project component in Merhabete. The institution sub-programme is intended to enable the MoA extension services to work more efficiently. The monitoring, research and evaluation sub-programme shall ensure proper implementation of the programme.

**1.11 Vulnerability to Famine:** As most subsistence peasants in rural Ethiopia, Merhabete farmers are also highly vulnerable to famine in years of reduced production. Such reductions may occur due to insufficient rainfall, too much rainfall, pests, economic stress, and as a result of traditional agriculture and ecological degradation. Vulnerability is also increasing due to population growth especially in recent years, since land resources have become very scarce in many parts of the country. While subsistence farming offers relative independence from external economic influence, it must be seen as a key element to induce famine in case of failure of agricultural production. The economic, transport and marketing system in such situations will not have the capacity to buffer food shortcomings. Reducing the vulnerability to famine, as a consequence, must be a top priority objective guiding all components of the present programme.



Northern Shewa Administrative Zone - Ethiopia  
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## II. THE PROGRAMME

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### A. Rationale and Programme Formulation

2.01 The proposed programme addresses priorities established by PDRE for the agricultural sector in Ethiopia, in particular the attainment of food grain self-sufficiency as stressed in the ten-year Perspective Plan (1983/84-1993/94). The strategy gives the peasant sector priority. The national plan for conservation of natural resources (MoA, Amharic Summary Report, 1984) gives priority to soil and water conservation activities and specifies main objectives and targets. The plan gives particular emphasis to badly eroded areas including Merhabete as part of the Northern Shewa area.

2.02 Recognizing that the current MoA services are inadequate relative to the need, and that agricultural development is needed if the peasant sector is to improve output, MoA developed a Peasant Agricultural Development Programme (PADEP). The PADEP strategy stresses the development of Service Cooperatives (SCs) and the strengthening of extension services. The development of SCs and the provision of Development Agents (DAs), as extensionists placed in each SC at a DA:farmer ratio of 1:1300, must be seen as a key to any community-based conservation and development activity in Merhabete. These DAs will have to receive ecological, technical as well as social training in participatory planning and development in order to become capable to implement community programmes.

2.03 "Conservation-based agricultural development", a term coined by the Ethiopian Highlands Reclamation Study of FAO-LUPRD, describes a broader approach in which physical and biological soil and water conservation measures form the basis for implementing further development inputs, as the ones foreseen in PADEP. Conservation of natural resources such as soil and water conservation and nature preservation was given as a responsibility to both the Government and all Ethiopians in Articles 10.1 and 55.3 of the Ethiopian Constitution (1987). Seeing the severity of degradation of soil and vegetation in Merhabete, development will not be sustainable if not ecological rehabilitation is attained at the same time. Intensive training and information campaigns concerning degradation and conservation is needed to motivate peasants of Merhabete to take responsibility for ecological regeneration.

2.04 Since it will be indispensable to provide inputs and incentives for peasants willing to apply conservation measures on their land and in their PAs, the Programme foresees a number of social infrastructure projects to be offered to them in return of their willingness to participate in land rehabilitation activities. Projects include spring development, roof catchments (cisterns), agricultural inputs in the form of natural fertilizing technology and some indispensable artificial fertilizers to be applied on conserved land, livestock support such as veterinary services, forage improvement and livestock management, women development support, tree seedlings for fuelwood and afforestation, support for SC center development, and on a regional scale, clinics, schools and water supply systems or impro-



vements. This package of inputs combined with conservation of natural resources, developed and agreed at SC level in participation of the communities, is seen as key element of the Programme. All activities correspond with the 5-year development plan of the Awraja Administration Office (Annex 18). They are listed as part of the programme components in para. 2.11 below. The DAs as key element for implementing the programme with the peasants will also need incentives for their work, to be provided by continuous training, by moral, technical and financial support, and by proper housing at their working place. Some incentives in the form of training, housing support, transports and per diems are also foreseen for the MoA supporting staff.

2.05 As the EEC and PDRE have agreed to implement a major land rehabilitation and agricultural development programme in Northern Shewa in the next five years (Merhabete, Menz & Gishe, and Yifat & Timuga), both programmes have to be closely coordinated concerning activities in Merhabete. Consensus has been reached at discussions with the Project Management Unit of the EEC programme that in Merhabete, EEC would confine itself to rural roads construction, irrigation development, agricultural experimentation and microprojects, and shift its total financial inputs for Merhabete of about 10 million Birr in 5 years to the above components. The EEC component for Merhabete would be coordinated with the present Programme in common annual work plans. The EEC components are listed in this document for comprehension of the overall Merhabete MoA programme.

## B. Main Objectives and Programme Components

2.06 Under the overall objectives of the Ten-Year Government Plan, the proposed programme shall adopt a five-pronged approach which, while focussing primarily on (1) conservation-based agricultural development, would also help small farmers to (2) regenerate drought-prone and degraded areas; (3) improve agricultural and livestock production in combination with conservation; (4) get better access to social infrastructural facilities such as SCs, clinics and schools, and to (5) improve primary health care in rural Merhabete. The EEC components would add better rural access, improved irrigation, and proposals for increased agricultural productivity in Merhabete.

2.07 The main objective of the community-based conservation, regeneration, agricultural and social infrastructure development sub-programme is the improvement of small farmer land productivity on an ecologically sustainable basis and the provision of social infrastructure as an incentive for required work inputs in package form. The sub-programme will form nuclei in all 45 SCs of Merhabete, through the provision of socially and ecologically trained extensionists (DAs) applying participatory planning and development, backed with technical material and financial support from the Merhabete MoA offices. The EEC component would add recommendations for agricultural improvements based on experiments carried out at SC level.

2.08 The main objective of the regional social infrastructure development sub-programme is to improve social services and primary health care for as many inhabitants of Merhabete as possible. The sub-programme will coordinate its activities at Awraja and Wereda level, but include participation of the rural population through PAs and SCs. The EEC component for rural roads, irrigation and microprojects would assist in reducing the vulnerability to famine and in better economic exchange.



2.09 The main objective of the institution support subprogramme is to facilitate the implementation of the activities needed to fulfill objectives of paras 2.07 and 2.08, through increasing the staff of the MoA in Merhabete to the scale required for implementing the programme, through training at all levels, through the provision of capital investments and running costs during the programme phase, and through the provision of expatriate manpower for coordination and technical support.

2.10 The main objective of the monitoring and evaluation (M&E) sub-programme is to ensure, to support with additional studies, and eventually to adapt the programme for improved implementation.

**2.11 Programme Components:** The proposed programme includes the following twelve components:

- (a) Support for soil and water conservation by strengthening the extension services and by financing material inputs on conserved land;
- (b) Support for community forestry by providing necessary inputs for the establishment of small nurseries in all SCs and for landuse planning;
- (c) Support for rural infrastructure by strengthening the technical manpower and by financing material inputs for community water supply systems (springs, wells, hand-pumps) to be implemented in combination with catchment conservation;
- (d) Support for rural infrastructure by strengthening the technical manpower and by financing material inputs for roof catchments (cisterns) in all established SC centers;
- (e) Support for agricultural development by financing revolving funds and technological skill for agricultural inputs on conserved land through SCs and by strengthening extension services and (through EEC) experimentation;
- (f) Support for rural women's development programme by strengthening the extension services and by financing material inputs;
- (g) Support for livestock development by strengthening the extension services and by financing revolving funds and material inputs on conserved land;
- (h) EEC component support for rural road construction, irrigation development and microprojects by strengthening technical manpower and by financing material inputs;
- (i) Provision of financing to the MoPH for the establishment of clinics to be implemented in combination with land conservation;
- (j) Provision of financing to the MoE for the establishment of schools in combination with land conservation;
- (k) Provision of financing to the NWRC for the development of water supply systems or improvements in larger villages which have accomplished afforestation and conservation activities in their vicinity;
- (l) Monitoring and evaluation.



### C. Detailed Features

#### (1) Community-based Conservation, Rehabilitation, Agricultural and Social Infrastructure Development Sub-programme (Total Inputs: 11.7 Million Birr)

2.12 The sub-programme strengthens conservation and development activities in the 45 Service Cooperatives (SCs), which include all peasants of Merhabete. The sub-programme shall apply principles of community participation. Key element in this process is the Development Agent (DA) of the MoA, who will be permanently stationed in the SC and has to be ecologically and socially trained. DAs have to be supported technically, financially and administratively by a strong Merhabete MoA office. The DA would be responsible for (a) education of peasants and formation of key farmers; (b) assessing needs and basic information for social infrastructure in the SC area; (c) developing conservation and afforestation plans and phasing the implementation works; (d) contracting peasant communities for the implementation of conservation and afforestation in exchange of social and agricultural inputs; (e) technically guiding and organizing the conservation works; (f) establishing and supervising a tree nursery in the SC; (g) planning and coordinating the establishment of the SC center; (h) coordinating all other activities of MoA in the SC and ensure that agreements made between the MoA and the SC/PA are strictly respected; (i) reporting and accounting. The Government assures that all activities executed through DAs in Merhabete shall be coordinated with the activities of the Programme.

2.13 The principle for achieving the overall goal of conservation-based agricultural development will be the creation of awareness by the peasants of their land degrading practices and of their own potential to carry out rehabilitation and regenerative activities under the guidance of the DA and some external support. The peasant community as a whole will be organized for conservation and reafforestation campaigns in the area of their SC. Such works and the subsequent maintenance would principally have to be voluntary. In exchange of the willingness to carry out such works, the peasant community will be offered social infrastructural and agronomic inputs, and detailed contracts of agreement will be worked out. Inputs will be phased according to the plans of the programme and the progress in implementation of conservation and afforestation.

2.14 **Soil and Water Conservation Support (2 Million Birr):** The component would provide for tools, extension and training materials for DAs, T&V systems for key farmers and PA leaders, inputs for trials on conserved land in agroforestry, compostage, green manure application, mulching, animal dung, improved black soil management and others. Extension would focus on awareness creation, understanding and the development of solutions in soil and water conservation and ecological regeneration, and in the organization of the works and responsibilities. Consensus was reached at discussions with MoA that written agreements can be made between MoA and PAs/SCs concerning conservation-based development.

2.15 **Community Reafforestation Support (2 Million Birr):** Financial, technical, material and training inputs would be provided in this component for the establishment or improvement of up to 45 small tree nurseries (existing and planned) at SC level, as well as for planning of community forestry in the SC areas. Extension would focus in motivation, participation and decision making for future use and allocation of community forest products and in the organization of the works and responsibilities. Consensus was reached



at discussions that the property of trees planted by PAs, peasant groups or individuals can be clearly defined to those groups or individuals provided that agreements were reached between MoA and the PAs/SCs concerned.

**2.16 Community Water Supply (2.5 Million Birr):** The component would provide for material support in the form of tools, cement, tubes, etc for the construction of up to 250 springs, ponds, hand-dug wells, bore-holes and garden irrigation in all PAs of Merhabete. In addition, construction brigades (see para 2.26) should be provided by the RIDD. Other work inputs will have to be furnished by the members of the peasant communities without payment. Water supply development would principally be conditioned upon agreement with the peasant community to implement soil conservation and afforestation.

**2.17 Roof Catchments (Cisterns, 0.5 Million Birr):** The component would be implemented along with the support for the establishment of SC centers. Scarcity of spring water could be compensated by constructing roof catchments and reservoirs along with each established SC center. Material support in the form of corrugated iron, barrels, cement, etc for up to 50 roof catchments would be provided by the component. Similar to para. 2.16, the development of roof catchments would principally be conditioned upon agreement with the peasant community to implement soil conservation and afforestation.

**2.18 Agricultural Inputs on Conserved Land (2.2 Million Birr, partly as revolving fund):** The component would support agricultural inputs, to be exclusively applied on conserved land. The DA will be primarily responsible for execution at SC level and ensure this precondition. Inputs would be artificial fertilizers according to soil analyses and urgent need, improved varieties and seeds for cereal and tuber crops, as well as herbicides according to urgent need. For some of the innovations, it will be necessary to carry out experimentation trials (see EEC component, para. 2.32).

**2.19 Rural Women Development Support (1 Million Birr):** The component is intended to provide basic facilities such as family nutrition education, primary health care, mother and child care, birth control, improved stoves, milling facilities, fuelwood plantations and some income generation through spring-fed irrigation for rural women of Merhabete. The project would be implemented on a pilot basis, kept flexible and monitored closely through the annual work programmes. Key executing elements would be socially trained female extensionists called Household Agents (HAs), one of which should be assigned to each 4-5 SCs. HAs should obtain the same training as the DAs, and key women should participate in planning and implementation at SC level of all activities affecting rural women.

**2.20 Livestock Support (1.5 Million Birr, to be partly used as revolving fund):** The component would include aspects of livestock development in combination with area conservation, such as fodder improvement, hay making from closed areas, silvipasture, provision of draught oxen, support of the veterinary services and marketing. The DA would be responsible for executing the projects at SC level, except for veterinary services which have to be organized at Wereda level. Extension support in the form of training and technical consultancy will be needed.

**2.21 Provision of Clinics, Schools, SC Development Support; and with EEC Component, Rural Roads, Irrigation Development, and Microprojects:** The Programme components will again be used as an incentive for soil conservation and reafforestation activities. Contract agreements between the peasant



communities which will benefit from such social infrastructure shall be developed in exchange for soil conservation and reafforestation. Since it will be necessary to coordinate such activities at Wereda level and with the EEC Management Unit, they form part of sub-programme (2), paras 2.22-2.25 and 2.27.

(2) Regional Social Infrastructure Development Sub-programme (Total Inputs: 3.2 Million Birr; plus EEC Component Addition of about 8.2 Million Birr)

**2.22 Material, Equipment and Staff for Clinics (special Agreement with Ministry of Public Health, 1.5 Million Birr):** According to contractual agreements with PAs and SCs for soil conservation and reafforestation, the Programme shall contact the Merhabete Planning Committee and MoPH, and develop agreements for financial support for the construction or improvement of up to 20 clinics in locations selected by the peasant communities, and supply them with basic equipment and medicines during programme implementation.

**2.23 Material for the Construction of Schools (Special Agreement with Ministry of Education, 0.5 Million Birr):** Construction or improvement of up to 10 schools may be offered as incentive for soil conservation and reafforestation in areas where school improvement is requested by the communities. The Programme shall contact the Merhabete Development Committee and MoE, and develop agreements for the financial support for constructing or improving up to 10 schools, according to the needs listed by peasant communities.

**2.24 Support for Water Supply Systems in Larger Villages (Special Contracts with Kebeles for Afforestation around Settlements; 1.2 Million Birr; Special Agreement with NWRC):** In selected larger villages, the respective populations may be motivated for afforestation and conservation activities in their vicinity, if in exchange water supply systems will be provided or improved by the Programme. According to the 5-year plan of the Merhabete Development Committee (Annex 18), about 10 larger villages will need such water development inputs. The Programme shall contact the NWRC and develop agreements for the financial support for constructing or improvement of up to 10 water supply systems, and ensure in cooperation with the Merhabete MoA NRCDD Team that the respective communities carry out afforestation works.

**2.25 EEC Component for Rural Roads Construction, Major Irrigation Development and Microprojects (EEC input about 8.2 Million Birr):** The need for rural access is extremely high in Merhabete (cf. Annex 18). Irrigation potential exists particularly along the main rivers Jema, Wenchit, Jara and Beto, but has to be developed. Microprojects could stimulate economic growth and improve supply of consumer goods in Merhabete or outside. Assurances were reached at negotiations with the EEC Delegation that the EEC component for Merhabete could concentrate on these activities following the relevant articles of the Lomé III convention and as requested by the Government of Ethiopia. EEC would shift its budget from other planned activities in Merhabete to these components and coordinate them with the Annual Work Plans of both programmes.



### (3) Institution Support Sub-programme (Total Inputs: 12.1 Million Birr)

**2.26 Provision of Per Diems, Transports and Salaries for Contractual and Permanent Employees of MoA Needed for the Programme Implementation (3.8 Million Birr):** Agricultural extension and social infrastructure development is based on the availability of manpower at all levels. Ecologically trained social workers are needed for the community approach. A number of 45 DAs and 10 HAs will be indispensable for the success of the programme. For their technical, administrative and educational backing, the MoA Merhabete offices will need considerable increase in staffing. The RIDD, which has no personnel at the Merhabete Awraja MoA office at present, will need the biggest increase in technical staff and construction brigades. The other three departments (ARDD, NRCDD, CPADD) will need some additional manpower. Totally, a number of 126 people will be required within the MoA structure, of which 12 will be degree holders, 23 diploma holders, and 91 people with various specializations. Out of the 126 new employees, 48 shall be employed on a contract basis and the rest on a regular basis.

**2.27 Capital Investments for Vehicles, Housing of Employees, Workshops, Tools, Equipment and Offices (2.8 Million Birr):** For some of the additional staff of the MoA structure, office space will have to be constructed. The Programme will need store and workshop facilities to be installed and equipped. Residential buildings are also needed for the 2 expatriates foreseen in the Programme. A training center shall be established in an available house in Alem Ketema for about 50 trainees and short-term courses. Assurances were obtained from the Merhabete Awraja Administration concerning the use of the existing building and the locations of residence and office buildings, which should all be located at Alem Ketema town. As a specific incentive component, material for housing for 55 DAs, 8 HAs who will have to live in rural areas will be provided. SCs will be offered material inputs for the development of their centers and stores, provided that conservation and reafforestation is carried out by the peasant communities in their area. Vehicles, equipment, materials and tools will be needed for project execution. The present set-up of the MoA will need financial and technical inputs for office renovation works related to the programme. The provision of housing against rents for MoA staff will be considered.

**2.28 Running Costs for Vehicles, Maintenance, Per Diems, Travels (2.4 Million Birr):** The component will provide for running costs of vehicles, per diems, travels with public transport and mules for the Merhabete MoA and additional staff needed to implement the programme.

**2.29 Training Courses and Visits (1.7 Million Birr):** Regular training courses on subject matters such as landuse planning, basic need assessment, participatory planning, soil and water conservation, reafforestation, spring development, etc. would be organized for DAs and HAs as well as for supporting staff. The part of the DAs without diploma would need special training of longer periods, coordinated through the MoA Training Department. Peasant leaders, key farmers and women would be offered T&V courses. Some fellowships for further education at local institutions could be foreseen for senior MoA staff if qualification and work efficiency allow.

**2.30 Expatriate Manpower for Coordination and Technical Support, Including Local Office Personnel (1.4 Million Birr):** A permanent Merhabete Programme Coordination Office (MPCO) shall be established and offices constructed within the Merhabete MoA at Alem Ketema to be effective during the execution of the project. MPCO is designed to fulfill an agreement of the letter of intent signed between MfM and ONCFER, where it was under-



stood that MfM shall maintain full cooperation with MoA and financial control of the Programme. MPCO will be staffed by two expatriates (1 coordinator and 1 technical advisor) and by necessary locally recruited staff for administration, accounting, technical advice and monitoring.

(4) Monitoring and Evaluation Sub-programme (Total Inputs: 1 Million Birr; plus EEC component addition of about 2 Million Birr)

2.31 The sub-programme would consist on one hand of an internal component, whereby a monitoring and evaluation mechanism would be developed for follow-up and planning (0.2 million Birr). Activities of the programme executing departments would be followed and their impact assessed. A second component of the sub-programme would include specific tasks of monitoring and studies needed for implementing the programme (0.8 million Birr). Projects would include: an aerial survey of Merhabete; a landuse study and socio-economic survey in selected SCs; a soil survey on high potential and on marginal soils; basic needs assessment of rural and urban population in selected SCs; a study on participatory planning; agronomic trials with natural and artificial fertilizers; soil conservation and hydrologic studies; socio-anthropologic studies, and other projects as need arises. Furthermore, an external impact assessment of the components and an external evaluation for mid-term review would be made.

2.32 The EEC component for M&E in Merhabete would include the coordination of the internal monitoring activities of the Programme within their Monitoring Unit; the piloting of land use rationalization in 1-2 PAs; field testing and pre-extension of promising technologies in selected SCs; 1-2 demonstration sites for agricultural improvements, and demonstration plots at SC level (0.5 ha each).

#### D. Costs and Financing

2.33 Total Programme cost is estimated at Birr 28 million of which about Birr 7,52 million or 27 % represent foreign exchange requirements. Investment costs are estimated at about Birr 7,96 million or 28 % and recurrent costs at about Birr 20,04 million or 72 %. Detailed cost estimates and financing of the Programme are summarized in Table 2.1 (see next page) and further specified in Annex 19.

2.34 The Programme costs would be financed in the following amounts by the following parties:

Ministry of Agriculture/PDRE:	Birr 2,500,000
"Menschen fuer Menschen":	Birr 25,500,000
Total Costs of Programme:	Birr 28,000,000

"Menschen fuer Menschen" would cover 91 % of the total programme cost, including 100 % of the foreign cost and 88 % of the local cost excluding taxes and duties. This foreign assistance would be used within MoA, MoPH and MoE as a grant according to the Programme components and regulations.



TABLE 2.1

## PROGRAMME COST AND FINANCING SUMMARY

(BIRR ,000)	MoA	DONOR		TOTAL
		IN ETH.	OUT- SIDE	
	=====	=====	=====	=====
(1) COMMUNITY-BASED DEVELOPMENT				
COMMUNITY S&W CONSERVATION		1,700	300	2,000
COMMUNITY AFFORESTATION		1,500	500	2,000
WATER SUPPLY DEVELOPMENT		2,000	500	2,500
ROOF CATCHMENTS (CISTERNS)		400	100	500
AGRICULTURAL INPUTS	200	1,000	1,000	2,200
RURAL WOMEN SUPPORT		800	200	1,000
LIVESTOCK SUPPORT		1,100	400	1,500
(2) REGIONAL DEVELOPMENT				
CLINICS (MoPH)		1,000	500	1,500
SCHOOLS (MoE)		400	100	500
WATER SUPPLY SYSTEMS (NWRC)		800	400	1,200
(3) INSTITUTION SUPPORT				
ADDITIONAL PERSONNEL	1,900	1,700	200	3,800
HOUSES, VEHICLES, TOOLS		1,500	1,300	2,800
RUNNING COSTS	400	1,700	300	2,400
TRAINING AND EDUCATION		1,500	200	1,700
EXPATRIATES (2) AND MPCO		500	900	1,400
(4) MONITORING AND EVALUATION (M&E)				
INTERNAL M&E		180	20	200
EXTERNAL M&E		200	600	800
TOTAL PROGRAMME COSTS	2,500	17,980	7,520	28,000

- NOTES:
1. PROGRAMME COST AND FINANCING SPECIFICATIONS (5-YEAR TOTALS) ARE LISTED IN ANNEX 19.
  2. THE EEC COMPONENT OF ABOUT 10 MILLION BIRR IS NOT INCLUDED HERE.

Additional EEC inputs in Merhabete would approximately amount to Birr 10,000,000. Overall inputs in the 5-year phase of MoA projects of MfM and EEC for Merhabete would therefore amount to

Birr 38,000,000  
=====

#### E. Procurement

2.35 All procurement of the components and consultant services to be financed by "Menschen fuer Menschen" (MfM) shall be in accordance with its own guidelines. Internationally recruited technical assistance staff would be procured by MfM and their CVs submitted to MoA for approval.

#### F. Disbursement

2.36 Disbursement from the Birr 25.5 million would be made by MfM according to its rules and regulations and annual work plans developed by MPCO in cooperation with MoA. The total length of the first phase of the programme is 5 years, from 1.1.1988 until 31.12.1992.

#### G. Accounts and Audit

2.37 All participating MoA Teams operating in Merhabete would maintain separate accounts and records of expenditures as designed by MPCO. MPCO would audit these accounts and forward regular balances to MfM. Consensus that the above accounting and auditing procedures would be followed was reached at discussions and followed the letter of intent signed between ONCFER and MfM in August 1987.



Northern Shewa Administrative Zone  
Merhabete  
Integrated Conservation and Development Programme (ICDP)

### III. PROGRAMME IMPLEMENTATION

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#### A. Organization and Coordination

3.01 The Ministry of Agriculture will be responsible for the overall implementation of the programme through its Vice-Ministries and Zonal Office. The head of the Merhabete MoA Office will assure the coordination, supervision and administration of the programme in close and mutual cooperation with the Merhabete Programme Coordination Office (MPCO) of "Menschen fuer Menschen" to be established at the Merhabete MoA Office. The Community-based Sub-programme will be implemented by the Merhabete MoA Office in cooperation with MPCO and the SCs concerned, technically assisted by the respective Departments of the Zonal MoA Office. The Regional Sub-Programme will be implemented by the respective Ministries through direct agreements with MfM/MPCO, or through the EEC component. All agreements for Programme inputs shall be developed by the Merhabete MoA Office in cooperation with MPCO and with consultation of the Merhabete Awraja Development Committee of PDRE. The Institution Support Sub-programme shall be implemented by the Merhabete MoA Office in close and mutual cooperation with MPCO, supported by the Personnel Section of the Zonal MoA Office for employment and training procedures. The Monitoring and Evaluation Subprogramme shall be administered by MPCO and Merhabete MoA Office for the internal component, and by MfM in consultation with MPCO and Merhabete MoA Office for the external component, and by the Zonal MoA Monitoring Unit for the EEC component.

3.02 In view of the EEC involvement in Northern Shewa and the need for close cooperation in the implementation of both programmes in Merhabete, it will be necessary to coordinate both activities at Zonal MoA Office level in the EEC Programme Management Unit. It was assured at discussions that the representative of MPCO would participate in the planning and budgeting of EEC-supported activities in Merhabete and that EEC would be consulted for the development of annual work plans and budgets and informed of all activities through the provision of annual reports of the programme.

#### B. Implementation of the Community-based Sub-programme

3.03 The soil and water conservation activities would be coordinated between the DA, the Merhabete NRCDD Team and the Merhabete Programme Coordination Office (MPCO), with technical support from the Zonal NRCDD Team. Agreements with SCs would be signed between the DA representing the MoA, the SC leaders, and MPCO. The budget would be administered by the Merhabete NRCDD Team for local expenditure, and accounted by MPCO. Foreign and external purchases would be administered by MPCO in cooperation with the Merhabete NRCDD Team.

3.04 The community reforestation activities would be coordinated between the DA, the Merhabete NRCDD Team and MPCO, with technical support from the Zonal NRCDD Team. Agreements with SCs would be signed be-



tween the DA representing the MoA, the SC leaders, and MPCO. The budget would be administered by the Merhabete NRCDD Team for local expenditures, and accounted by MPCO. Foreign and external purchases would be administered by MPCO in cooperation with the Merhabete NRCDD Team.

3.05 The community water supply development activities would be coordinated between the DA, the Merhabete RIDD and NRCDD Teams and based on proposals of the DA as developed with the participation of the community. Agreements with the respective PAs concerning conservation of part of their area and participation in the activities would be needed beforehand. Such agreements with SCs would be signed between the DA representing the MoA, the SC leaders, and MPCO. The budget would be administered by the Merhabete RIDD Team for local expenditures, and accounted by MPCO. Foreign and external purchases would be administered by MPCO in cooperation with the Merhabete NRCDD Team.

3.06 The roof catchment (cistern) activities would be coordinated between the DA, the Merhabete RIDD, NRCDD Teams and MPCO, and based on proposals of the DA. Agreements with the respective PAs concerning conservation of part of their area and participation in the activities would be needed beforehand. Such agreements with SCs would be signed between the DA representing the MoA, the SC leaders, and MPCO. Technical support for roof catchments would be provided by the Zonal RIDD and NRCDD Offices. The budget would be administered by the Merhabete RIDD Team for local expenditures, and accounted by MPCO. Foreign and external purchases would be administered by MPCO in cooperation with the Merhabete NRCDD Team.

3.07 The agricultural input activities would be coordinated between the DA, the Merhabete CPADD, NRCDD Teams and MPCO, and based on proposals by the DA. The DA would ensure that artificial fertilizer inputs would only be made on conserved land. The financial means would be provided in the form of a revolving fund, whereby farmers will have to pay for net costs of such inputs. Conceptual and technical support for agricultural inputs would be provided by the Zonal CPADD Office. Other agricultural inputs such as chemicals would be provided by MoA in its regular programme. Assurances were obtained to this effect. The local budget and the revolving fund would be administered by the Merhabete CPADD Team, and accounted by MPCO. Foreign and external purchases would be administered by MPCO in cooperation with the Merhabete CPADD Team.

3.08 The rural women development support activities would be planned and administered by the Rural Women's Team (RWT) at the Zonal Office and the RWT representative in Merhabete. Although the HAs assigned to SCs would basically have similar tasks as the DAs, they would primarily ensure that a reasonable number of women participate in planning of activities which concern women directly, such as spring development, afforestation, roof catchments, clinics, livestock, and rural women support. Financial means would be made available for material inputs, training, T&V for key women, and extension. The MPCO would be responsible for administering the budget and for accounting and technical support.

3.09 The livestock support activities would be coordinated between the DA, the Merhabete ARDD, NRCDD Teams and MPCO. Conceptual and technical support for livestock development inputs would be provided by the Zonal ARDD Office and eventually by external consultancy services. The financial means would in part be provided as revolving fund, whereby farmers will have to pay for net costs of veterinary services. The budget would be



administered by the Merhabete ARDD Team, and accounted by MPCO. Foreign and external purchases would be administered by MPCO in cooperation with the Merhabete ARDD Team.

### C. Implementation of the Regional Sub-programme

3.10 The rural roads construction, the irrigation and the microproject activities would be planned through the EEC component for Northern Shewa in cooperation with the Merhabete MoA, and preferably also with the Merhabete Awraja Development Committee, the DAs of involved SCs, and MPCO.

3.11 The clinic construction and equipment activities have to be planned in cooperation with the Merhabete Awraja Development Committee, Merhabete MoA, the DAs of involved SCs, and MPCO. The MoPH would have to be contracted by MfM/MPCO for the clinics' development component. MfM/MPCO will have to ensure that necessary clinic staff shall be assigned by MoPH at completion of the clinics. The budget would be administered by the MoPH according to agreements. Foreign and external purchases would be administered by MfM/MPCO in cooperation with MoPH according to the agreements.

3.12 The school construction activities have to be planned in cooperation with the Merhabete Awraja Development Committee, Merhabete MoA, the DAs of involved SCs, and MPCO. The MoE would have to be contracted by MfM/MPCO for the schools' development component. MfM/MPCO will have to ensure that necessary teachers shall be assigned by MoE at completion of the schools. The budget would be administered by the MoE according to agreements. Foreign and external purchases would be administered by MfM/MPCO in cooperation with MoE according to the agreements.

3.13 The water supply construction activities in larger villages have to be planned in cooperation with the Merhabete Awraja Development Committee, Merhabete MoA, the DAs of involved SCs, and MPCO. MfM/MPCO shall contact the NWRC and develop agreements for the financial support for constructing up to 10 larger water supply systems, and ensure in cooperation with the Merhabete MoA NRCDD Team that the respective communities carry out afforestation works around their towns.

### D. Implementation of the Institution Support Sub-programme

3.14 **Personnel:** Since virtually all activities of the programme will depend on viable and well trained MoA manpower in Merhabete, the staff will have to be upgraded in number and qualification from the beginning of the Programme onwards. From the 126 people additionally needed for implementing the programme, 78 shall be regularly employed by MoA and assigned in Merhabete for the duration of the Programme. From these 78, 55 will be DAs and HAs, 12 degree holders, and 11 people with various specializations.

3.15 Assurances were obtained that MoA would provide 10 diploma holders as DAs and assign them in Merhabete MoA before 31 March 1988. Furthermore, MoA would recruit in cooperation with MPCO until 31 March 1988 an additional 35 people who have completed 12th grade and are 20 years or above, to be assigned at Merhabete MoA as Assistant DAs, and provide for their salaries according to PDRE scales as from 1 July 1988 onwards. Between 31 March and 30 June 1988, MPCO would prepare a first training for these newly recruited DAs, which will be continued in regular courses dur-



ing the Programme implementation phase and cover about 12 months' total education. MoA assured that after two working years, when the DAs would have adequate experience and training, they would be upgraded to DA level by 30 June 1990.

3.16 Assurances are obtained that MoA would recruit in cooperation with MPCO until 31 March 1988 a number of 10 women who have completed 12th grade and are 20 years or above, to be assigned at Merhabete MoA as Household Agents (HAs), and provide for their salaries according to PDRE scales as from 1 July 1988 onwards. Between 31 March and 30 June 1988, MPCO would prepare a first training for these newly recruited HAs, which will be continued in regular courses during the Programme implementation phase and cover about 12 months' total education.

3.17 Assurances are obtained that MoA would provide until 31 March 1988 12 degree holders in the following professions: 1 road construction engineer, 1 veterinary doctor, 1 livestock manager, 6 agronomists, 1 training expert, 1 forester, 1 agricultural engineer, and assign them at Merhabete MoA for the duration of the Programme. In case of MoA's inability to meet this assurance, MPCO would be mandated to recruit this number of personnel in cooperation with MoA until 30 June 1988, and MoA would provide for their salaries as from 1 July 1988 onwards.

3.18 Assurances are obtained that MoA would provide until 31 March 1988 11 people with various specializations, namely 2 hides and skins' experts, 2 laboratory technicians 1 secondary school teacher, 4 drivers and 2 mechanics. These people would be assigned at Merhabete MoA for the duration of the Programme.

3.19 Until latest 30 June 1988, the Merhabete RIDD Team with the support of MPCO shall employ on contract basis a number of 48 people for the Programme implementation phase, namely 12 masons, 24 assistant masons, 6 construction supervisors, 2 surveyors, and 4 assistant surveyors. The contracted personnel shall be administered and equipped by the Merhabete RIDD Team with finances of MfM, and the costs audited by MPCO. The construction brigades, which will possibly start their work much earlier, shall be responsible for all construction works of the Programme, including residential buildings, offices, a store and a workshop in Alem Ketema, housing for DAs and HAs, and social infrastructure and other institution building works in Merhabete. For their activities in remote areas, they need to be equipped with mobile residential facilities (tents, mules).

3.20 **Capital Investments:** Until 31 March 1988, MPCO in cooperation with Merhabete MoA shall order from abroad 1 Steyr 4x4 lorry, 4 4x4 pickups, 4 4x4 station wagons and all other equipments and tools needed for Programme implementation. Assurances are given by PDRE that all such items imported for the Programme on grant basis can be freed from custom duties, taxes and related charges, and that PDRE shall facilitate the registration of vehicles brought into Ethiopia for the Programme, and provide aid-license plates in accordance with regulations of the Ethiopian Road Transport Authority. Until 30 June 1988, residential as well as office buildings, a store and a workshop shall be constructed at Alem Ketema. Furthermore, materials and technical support through brigades shall be provided for the construction of 55 residential houses for DAs and HAs at SC level in various locations in Merhabete, the first two Weredas to be completed until 31 December 1988. All other capital investments shall be made according to the programme components.



**3.21 Running Costs:** The respective teams of the Merhabete MoA Office would be responsible for administration of local expenditures such as salaries and per diems for contract employees funded by the donor. The Merhabete MoA Office would be responsible for per diems and travel costs of regular employees, to be partly funded by the donor. MPCO would provide for accounting of its own financial inputs for running costs, and for external or foreign expenditures. MPCO in cooperation with the Merhabete MoA Head would coordinate the assignment of vehicles and equipments to the various programme components and MoA teams in Merhabete according to need and priority. Vehicles provided by the Programme would be for the exclusive use of Programme activities and marked appropriately.

**3.22 Training Courses and Visits:** The training aspects, providing educational support for key farmers and leaders, rural women and leaders, DAs, HAs and other MoA staff, would be administered by the respective teams of the Merhabete MoA Office and the MoA Training Department in cooperation with MPCO, which would provide for administration and accounting of training expenditures.

**3.23 Expatriate Manpower and MPCO:** A permanent Merhabete Programme Coordination Office (MPCO) shall be established within the Merhabete MoA Office during the execution of the project. It will be staffed by two expatriates (1 Coordinator, 1 technical adviser) and by necessary locally recruited staff for administration, accounting, technical support and monitoring. Until latest 31 January 1988, MfM shall propose to MoA for approval 2 expatriates to be assigned at the MPCO in Alem Ketema. Assurances were obtained from PDRE that foreign experts of this Programme shall be given special immigration permits, permissions, exemptions from customs duties and other taxes in accordance with rules applied for UN expatriates in Ethiopia, and that they shall also be exempted from any liability for damages resulting from or connected with acts performed during the execution of tasks assigned to them under this Programme, unless such acts or omissions be willful misconduct or arise from gross negligence.

#### E. Implementation of the M&E Sub-programme

**3.24** MPCO would be responsible for developing a monitoring and evaluation system for the internal component of the monitoring and evaluation sub-programme. MfM would coordinate the external component of the monitoring and evaluation sub-programme in cooperation with MPCO and Merhabete MoA. This would also include consultancy services and studies. Activities of this latter component would be executed by external institutions or individuals.

#### F. Annual Work Plans

**3.25** Annual work plans for the years 2-5 would be prepared by MPCO in cooperation with Merhabete MoA, with consultation of the Zonal MoA Office for coordination with the EEC Programme. They would include: (i) a review of Programme implementation in the current year; (ii) detailed description of the work to be carried out in the forthcoming year, including objectives, SC development plans and agreements, deployment of staff and equipment; (iii) requirements for additional staff, equipment and inputs; and (iv) a budget plan, including foreign and local funds required from MfM, PDRE, and the EEC component in Merhabete. The annual work plans would enable MoA and MfM to review Programme progress and provide the neces-



sary support needed for implementation. The first year work plan, covering the period from 1.1.1988 until 30.6.1989, would be formulated upon signature of the Programme by both parties. This plan would be compiled by external consultants until 25 January 1988, and approved by MoA and MfM thereafter. For the following years, the draft plan would be submitted to the PDRE by April 15 (the first on 15 April 1989), after a review of the plan by the MoA Zonal Office, and to MfM on 15 May each year for review. The final plan, embodying MfM comments, would be resubmitted to MfM by 30 June. Consensus to this effect was reached from MoA at discussions.

#### G. Mid-term Review

3.26 The value of a mid-term review of the implementation process and a preliminary evaluation of its impact is uncontested. It should be effectuated after 3 years of programme implementation, but not later than 30 June 1991. MPCO in cooperation with Merhabete and Zonal MoA Offices shall prepare a mid-term review report in accordance with terms of reference prepared in consultation with an external evaluation team, and review the findings with MoA and MfM. The mid-term review report would, among other things, examine the constraints which may have affected Programme implementation. Special importance would be given to an assessment of the conservation-based agricultural development idea, in which peasant communities are contracted for conservation and reafforestation works in exchange of incentives and inputs. The remaining Programme and its scope would also be reviewed.

#### H. Status of Programme Preparation

3.27 To facilitate the expeditious start of the Programme, it will be necessary to work out a detailed and comprehensive work plan for the first year of implementation. Experiences in Ethiopia have shown that recruitment of personnel and construction works are usually delayed considerably. Inaccessibility in rural Merhabete will harden communication between extension workers and Programme coordination. It is recommended to start activities in only two out of six Weredas in the first year, and gradually expand as infrastructural development allows. Studies to gain information for planning and inputs shall be initiated immediately. Infrastructural development of offices and residential buildings are also needed as soon as possible. Manpower assignment and development will remain as the key for all implementation activities. MfM has allocated funds for a consultancy for working out a detailed 1st year work plan until 25 January 1988, after the Programme Document has been signed until 31 December 1987 according to the MfM-ONCFER letter of intent.



Northern Shewa Administrative Zone - Ethiopia  
Merhabete  
Integrated Conservation and Development Programme (ICDP)

#### IV. BENEFITS, IMPACTS AND RISKS

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##### A. Programme Benefits

4.01 The Programme will make an important contribution to PDRE efforts to combat environmental degradation and to increase food security and health by introducing conservation-based agricultural and social infrastructure development to Merhabete. The main quantifiable benefits will be the conservation of about 50 % of all cultivated land in Merhabete (about 50'000 ha); the closure and reafforestation of about 25'000 ha of hillsides; the improvement of animal feed through better livestock management and controlled grazing on a further 50'000 ha of grazing land; the improvement of primary health through women support and through the development of about 250 community water supply systems and 50 roof catchments; the provision of medical treatment through 20 clinics; the improvement of education through the construction or renovation of 10 schools; the improvement of production through water conservation and fertilizer inputs on conserved land; the provision of fuelwood in towns through reafforestation of their surroundings (about 5000 ha), and the improvement of primary health in towns through the provision of about 10 large water supply systems. Furthermore, agricultural extension will be considerably strengthened through continuous formation of socially trained ecological extensionists. In addition to this Programme, the inputs of the EEC components in Merhabete will considerably improve access through rural road construction and agricultural production through development of major irrigation schemes and agronomic practices.

##### B. Environmental Impact

4.02 Through soil and water conservation, reafforestation and controlled grazing measures, about 125'000 ha or one third of Merhabete will be ecologically stabilized, if management and maintenance can be ensured also in future. Since these 34 % of Merhabete form the most valuable part of the area, the remaining being dry and hot lowland areas or inaccessible steep mountain slopes, the first phase of the Programme shall have a significant environmental impact already. The remaining cultivated land would have to be treated at a later stage in a planned follow-up phase of the Programme, and some may have to be abandoned due to unsuitable slope and soil conditions. Merhabete is possibly capable of supporting its present population if the Programme becomes effective. However, rapid increases of population also in future will certainly lead to the need for resettlement of part of this additional population into higher productive areas if available.

##### C. Social Impact

4.03 The community approach adopted for this Programme is expected to improve community responsibility for the environment and the perception of consequences resulting from resource-abusing agricultural practices. Also, innovative forms of action against environmental degradation are expected to



develop among individuals, groups of peasants, and the larger communities of Peasant Associations and Service Cooperatives. The programme will also make farmers' communities participate in community planning and development. Clean drinking water for all inhabitants of Merhabete as well as some improvement in gardening, coupled with some increase in production and overall land productivity, will have social impact on the population leading to physical improvements. Agricultural extension and education, finally, will contribute to improved farm management and hence higher farm outputs in Merhabete.

#### D. Economic Impact

4.04 Despite of improved farm production as a result of the Programme, the economic impact will be relatively small compared to the overall situation in Merhabete. The total investment of 28 Million Birr will give an input of only 93 Birr per inhabitant of Merhabete over the five years of Programme implementation. 43 % of the budget will have to be used for institution support services and construction brigades, who will provide the extension and technical support for infrastructural development in the peasant communities.

#### E. Programme Risks

4.05 Major programme risks have to be seen in the human element of the activities. Negative attitudes of the rural population towards community-based activities, towards improved agricultural practices, towards soil conservation or towards the Government may lead to delays in the Programme. The agreement approach to be tested for implementing soil conservation and reafforestation without direct payment, but with social and agricultural inputs and technical guidance, may be hampered by the fact that in parts of Merhabete Food-For-Work activities of WFP have been carried out since some years. The assumption that by providing short-term inputs according to felt needs it will be possible to make the populations also aware of the long-term needs for natural resource conservation and sustainable agricultural production will have to be tested. The DAs and HAs as extensionists will play a key role in the Programme. If they can not be convinced and motivated to become active in community-based development and to live in remote rural areas mostly inaccessible by vehicles, the work will not yield the expected benefits. The Programme has foreseen most of the inherent risks and designed ways to overcome them.

Northern Shewa Administrative Zone - Ethiopia  
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### V. ASSURANCES

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5.01 During discussions, consensus was reached concerning the following assurances of PDRE indispensable for the Programme implementation:

- (a) The EEC project component for Merhabete of the "North Shewa Rural Reclamation and Development Project" would be confined to rural roads' construction, irrigation development, agricultural experiments and microprojects, and shift its total financial inputs for Merhabete of about 10 million Birr in 5 years to these components. The EEC project component for Merhabete would be coordinated with the present Programme in common annual work plans (paras 2.05, 2.25 and 2.32);
- (b) All activities executed by MoA and other PDRE agencies through DAs in Merhabete shall be coordinated with the activities of the Programme (para. 2.12);
- (c) Written agreements can be made between MoA and PAs or SCs concerning conservation-based development (para. 2.14);
- (d) The property of trees planted by SCs, PAs, peasant groups or individuals can be guaranteed upon approval by the concerned PA/SC (para. 2.15);
- (e) An existing building to be improved and used as training facility for the Programme, and land for residential buildings, offices, a store and a workshop, was allocated to the Programme by the Merhabete Administrator (para. 2.27);
- (f) The PDRE would in addition to its regular MoA budget in Merhabete allocate up to Birr 2'500'000 as a contribution towards the Programme according to the budget for the five years' phase, covering 9 % of the total cost (paras 2.33 and 2.34);
- (g) MoA and PDRE would comply with the accounting and auditing procedures outlined in paras 2.37 and 3.03-3.13;
- (h) The representative of MPCO would participate in the planning and budgeting of EEC-supported activities in Merhabete and EEC would be consulted for the development of annual work plans and budgets, and informed of all activities through annual reports of the Programme (para. 3.02);
- (i) MoA would provide agricultural inputs to Merhabete according to its regular programme (para. 3.07);
- (j) MoA would provide 10 diploma holders as DAs and assign them in Merhabete MoA before 31 March 1988. MoA would recruit in cooperation with MPCO until 31 March 1988 an additional 35 people who have completed 12th grade and are 20 years or above, to be assigned at Merhabete MoA as Assistant DAs. PDRE would provide for their salaries



according to CPA as from 1 July 1988 onwards. MoA would upgrade the Assistant DAs after a period of two years with additional training and experience provided by the Programme, by June 30, 1990 (para. 3.15);

- (k) MoA would recruit in cooperation with MPCO until 31 March 1988 a number of 10 women who have completed 12th grade and are 20 years or above, to be assigned at Merhabete MoA as HAs. PDRE would provide for their salaries according to CPA as from 1 July 1988 onwards (para. 3.16);
- (l) MoA would provide until 31 March 1988 12 degree holders in the following professions: 1 road construction engineer (as team leader), 1 veterinary doctor (as team leader), 1 livestock manager, 6 agronomists, 1 training specialist, 1 forester, and 1 agricultural engineer, and assign them at Merhabete MoA. In case of inability of MoA to meet this assurance, MPCO would be mandated to recruit this number of personnel in cooperation with MoA until 30 June 1988, and MoA would provide for their salaries as from 1 July 1988 onwards (para. 3.17);
- (m) MoA would provide until 31 March 1988 11 people with various specializations, namely 2 hides and skins' experts, 2 laboratory technicians, 1 secondary school teacher, 4 drivers and 2 mechanics, and assign them at Merhabete MoA (para. 3.18);
- (n) PDRE would free all vehicles, equipment and tools needed for Programme implementation, from custom duties, taxes and related charges. Vehicles would be equipped with aid-license plates (para. 3.20);
- (o) Vehicles provided would be for the exclusive use of Programme activities and marked appropriately (para. 3.21);
- (p) Expatriates would be given permits, privileges and exemptions as is the rule for UN expatriate experts (para. 3.23);
- (q) Annual work plans would be prepared and submitted according to procedures outlined in para. 3.25;
- (r) A mid-term review of the Programme would be prepared and submitted according to procedures outlined in para 3.26.

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LIST OF ANNEXES

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ETHIOPIAMerhabete Integrated Conservation and Development ProgrammeEstimated Area of Administrative Units

	<u>Administrative Capital</u>	<u>Estimated Area of Administrative Unit</u> (ha)	<u>Road Access</u>	<u>Altitudinal Range</u> (m.a.s.l.)
<u>Merhabete</u>	Alem Ketema	363'000	all weather	1050-2650
Weremo and Wajitu	Rema	30'000	dry season	1260-2325
Mida	Meragna	54'000	dry season	1260-2650
Dera	Yaya (Gundo Meskel)	133'000	dry season	1050-2575
Lay Bet	Alem Ketema	65'000	dry season	1300-2642
Tach Bet	Fitra	33'000	all weather	1159-2248
Bitu Belew	Shelafaf	48'000	dry season	1500-2611

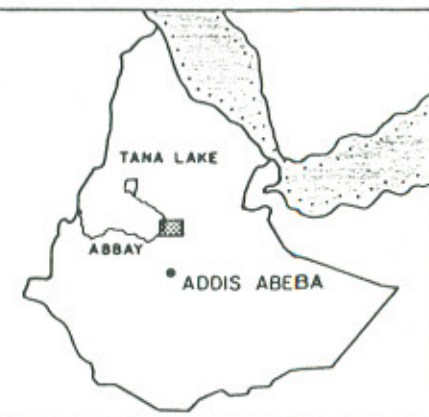
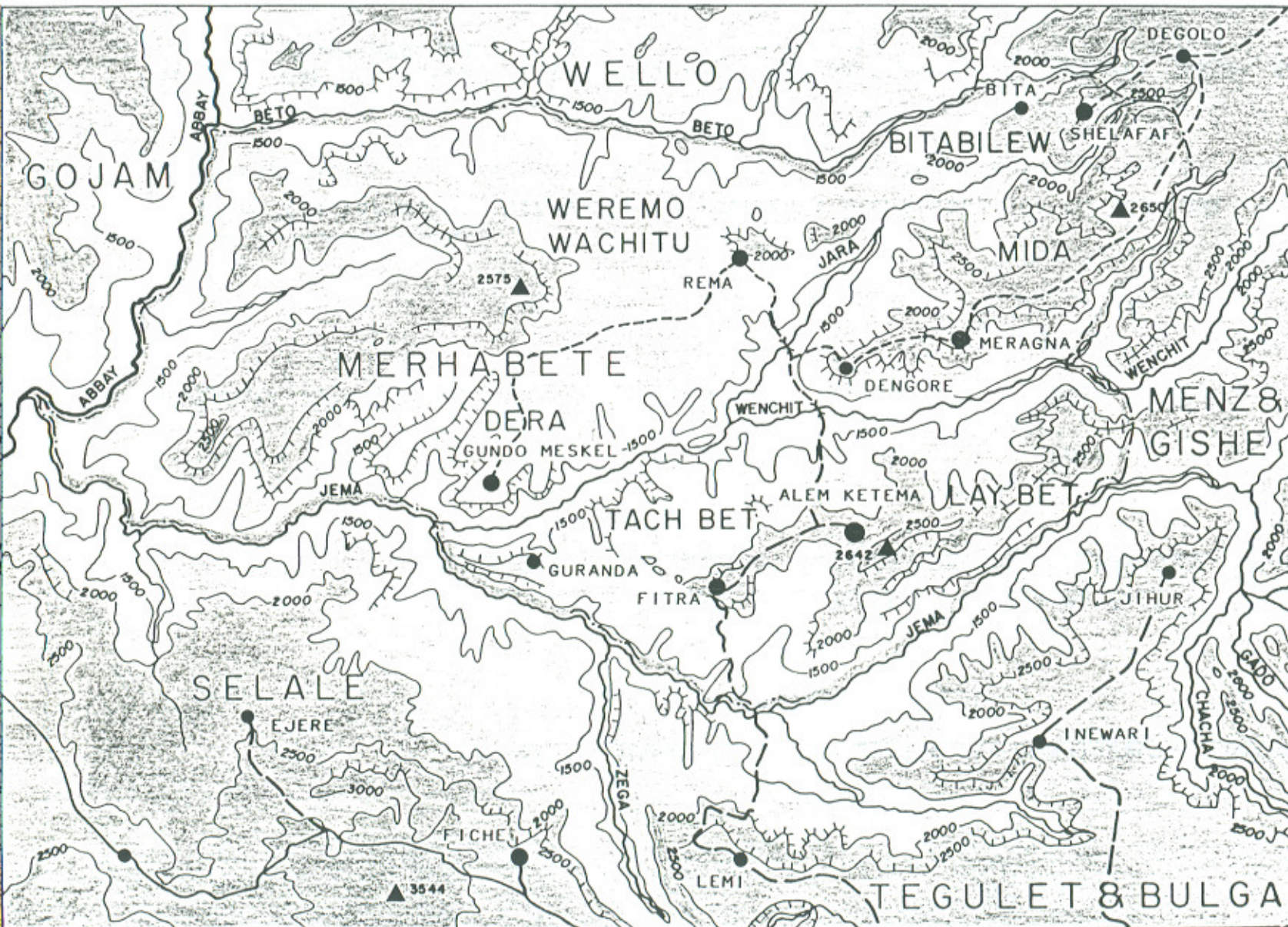
Source: The total area of the Awraja's has been obtained from EMA 1:250'000 maps.\*  
The area of the Weredas has been estimated. The altitudinal ranges are obtained from the maps.

\* MoA statistics quote 230'000 ha, CSO statistics 460'000 ha for Merhabete Awraja.



# MERHABETE : TOPOGRAPHY, RIVERS, ROADS, BOUNDARY, CAPITALS

< 1500 m 
  1500-2000 m 
  2000-2500 m 
  2500-3000 m 
  > 3000 m asl.



## LEGEND

- 1500— ALTITUDE IN M ASL
- ESCARPMENT
- BETO RIVER
- ▲ 2642 PEAK ELEVATION
- AWRAJA CAPITAL
- WEREDA CAPITAL
- MAJOR ROAD (ASPHALT)
- MAJOR ROAD (GRAVEL)
- - - DRY-WEATHER ROAD
- SELALE AREA NAME



**REFERENCE:** GENERALIZED FROM EMA SHEETS NC 37-6, NC 37-7, NC 37-10, NC 37-11; ROAD AND NAMES ADDED.  
**DESIGN:** H. HURNI, SEPTEMBER 87  
**CARTOGRAPHY:** O. HEINIGER, NOVEMBER 87



ETHIOPIA

Merhabete Integrated Conservation and Development Programme

Population Data 1/

	<u>Total</u> <u>Population</u>	<u>Rural</u> <u>Population</u>	<u>Urban</u> <u>Population</u>	<u>Rural as % of</u> <u>Total Population</u>	<u>Population</u> <u>Density</u> (persons/km <sup>2</sup> )	<u>Average Rural</u> <u>Family Size</u>
Merhabete 1983	271,471	262,332	9,139	96.6	74.7	5.0
Merhabete 1987 <u>2/</u>	304,000	294,000	10,000	96.8	83.7	5.0

1/ These figures do not allow for resettlement and deaths due to the 1984 drought.

2/ Extrapolation was made with the 1983 data (CSO, 1984; assuming a 2.9% annual population growth rate).

Source: CSO Population Census, May 1984. Quoted from FAO Investment Centre Report No. 27/85 UTF-ETH.

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Merhabete Integrated Conservation  
and Development Programme  
Livestock Population

	<u>Cattle</u>	<u>Ox</u>	<u>Oxen/Farm</u>	<u>Sheep</u>	<u>Goats</u>	<u>Equines</u>
	..... No .....					
Merhabete	137,281	63,836	1.21	30,384	42,249	21,190

Source: MoA, General Agricultural Survey, op.cit., quoted from  
 FAO Investment Centre Report No 27/85 UTF-ETH



ETHIOPIAMerhabete Integrated Conservation  
and Development ProgrammeDistribution of Main Soil Units

<u>Main Soil Units</u>	<u>%</u>	<u>ha</u>
Regosols	-	-
Lithosols	-	-
Arenosols	32.6	118'338
Rendzinas	21.7	78'771
Vertisols	8.7	31'581
Phaeozems	23.9	86'757
Cambisols	13.1	47'553
<hr/>		
T o t a l	100.0	363'000

Source: Land Use Planning and Regulatory Department  
(LUPRD) and Ethiopian Highlands Reclamation  
Study (EHRIS) 1984.

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Merhabete Integrated Conservation  
and Development Programme

Distribution of Soil Depth Classes

<u>Soil Depth Classes</u>	<u>%</u>	<u>ha</u>
10 - 25 cm	43.5	157'905
25 - 50 cm	43.5	157'905
50 - 100 cm	-	-
100 - 150 cm	12.4	45'012
150 cm	0.6	2'178
<hr/>		
T o t a l	100.0	363'000

Source: Land Use Planning and Regulatory Department  
 (LUPRD) and Ethiopian Highlands Reclamation  
 Study (EHRS) 1984.



Monthly Rainfall Reliability Amounts

<u>Month</u>	<u>Alem Ketema</u> (Annual Mean: 1145.92 mm)											
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>	<u>12</u>
	.....mm/month.....											
At 1 out of 2 years	4	31	52	26	65	97	366	324	155	26	-	-
At 2 out of 3 years	1	26	49	19	51	75	348	285	130	13	-	-
At 3 out of 4 years	-	24	47	15	45	64	339	266	118	6	-	-
At 4 out of 5 years	-	22	46	13	40	56	332	251	108	1	-	-
At 9 out of 10 years	-	18	43	6	28	35	314	215	84	-	-	-

<u>Debre Birhan</u> (Annual Mean: 1015.97 mm)												
At 1 out of 2 years (mean)	16	29	44	72	45	68	314	295	92	14	13	7
At 2 out of 3 years	3	11	30	54	29	42	285	264	78	8	-	-
At 3 out of 4 years	-	3	22	45	22	29	270	249	71	5	-	-
At 4 out of 5 years	-	-	17	38	16	19	259	237	65	3	-	-
At 9 out of 10 years	-	-	3	21	1	-	231	208	51	-	-	-

<u>Fiche</u> (Annual Mean: 1338.94 mm)												
At 1 out of 2 years	33	42	41	50	68	105	430	362	140	46	9	7
At 2 out of 3 years	18	27	26	38	46	78	389	312	114	14	2	2
At 3 out of 4 years	11	20	19	33	35	64	369	288	101	-	-	-
At 4 out of 5 years	6	14	13	28	26	54	353	269	91	-	-	-
At 9 out of 10 years	-	-	-	17	6	29	315	223	67	-	-	-

Source: ILCA, 1985, unpublished data. Quoted from FAO Investment Centre Report No. 27/85 UTF-ETH.

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Merhabete Integrated Conservation and Development Programme

Land Use

(ha)

	<u>Total Area</u>	<u>Cultivated Land</u>	<u>Cult. Land per family</u>	<u>Forest Land</u>	<u>Grass Land</u>	<u>Unusable</u>
ha	363'000	96'500	1.61	36'300	193'842	36'300
%	100	26.6	-	10.0	53.4	10.0

Source: Estimations based on field survey 23-25 September 1987 (Hurni, 1987)



ETHIOPIAMerhabete Integrated Conservation and Development ProgrammeCropping Patterns

(%)

	<u>Sorghum</u>	<u>Teff</u>	<u>Maize</u>	<u>Barley</u>	<u>Wheat</u>	<u>Pulses</u>	<u>Others</u> <sup>1/</sup>
<u>Merhabete</u>							
Werem <sup>o</sup> and Wajitu Wereda	40	45	-	-	10	5	-
Mida Wereda	50	40	1	-	-	-	9
Dera Wereda	40	30	-	5	10	15	-
Lay Bet Wereda	45	30	-	5	15	-	5
Tach Bet Wereda	50	40	-	-	-	10	-
Bitu Belew Wereda	30	10	-	-	50	10	-

<sup>1/</sup> Includes sorghum, maize, flax.

Source: MoA Awraja Offices, quoted from FAO Livestock Centre Report No 27/85 UTF-ETH.

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Merhabete Integrated Conservation and Development Programme

Crop Yields  
-----

Altitudinal zone	Sorghum	Tef	Barley	Maize	Wheat	Pulses
-----						
Kolla <1500 m asl	10 qt/ha	8 qt/ha	-	-	-	-
Weyna Dega 1500-2500 m	8 qt/ha	8 qt/ha	12 qt/ha	20 qt/ha	10 qt/ha	8 qt/ha
Dega >2500 m asl	-	-	12 qt/ha	-	10 qt/ha	8 qt/ha
-----						

Normal crop yield per major crop and altitudinal zone in Merhabete (in quintal (= 100 kg) per hectare: qt/ha).

Interpretation: The given yield estimates are relatively low, since there is almost no input of fertilizer.

Source: MoA Awraja personnel and estimations (Hurni, 1987)



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Merhabete Integrated Conservation and Development Programme  
1987 Cropping Pattern According to Altitudinal Belts

Altitudinal zone	Tot.cultivated		Sorghum		Tef		Barley		Maize		Wheat		Pulses	
	%	ha	%	ha	%	ha	%	ha	%	ha	%	ha	%	ha
<hr/>														
Kolla														
< 1500 m	10	7'100	8	5'680	2	1'420	-	-	-	-	-	-	-	-
Weyna Dega														
1500-2500 m	30	82'200	21	57'540	5	13'700	1	2'740	1	2'740	1	2'740	1	2'740
Dega														
> 2500 m	40	7'200	-	-	-	-	24	4'320	-	-	4	720	12	2'160
<hr/>														
Total	27	96'500	17	63'220	4	15'120	2	7'060	1	2'740	1	3'460	1	4'900
<hr/>														

Area in hectares (ha) of altitudinal zonation, landuse pattern (%) and major crops for Merhabete Awraja. The total area sizes for the altitudinal zones are 71'000 ha for the Kolla belt, 274'000 ha for Weyna Dega belt, and 18'000 ha for the Dega belt.

Interpretation: The Weyna Dega altitudinal zone clearly occupies the most important part of Merhabete Awraja, and is the major cultivation area for sorghum, tef, maize, wheat, and pulses. The next important zone is the Dega, a cool highland area where most towns are located. In the Kolla zone, there are virtually no settlements due to problems of malaria and probably also Tsetse fly, while there is still some cultivation of sorghum and tef.

Source: Field estimation and maps 1:250'000 of EMA (Hurni, 1987)

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Merhabete Integrated Conservation and Development Programme

Altitudinal zone	Normal Year Production					
	(quintals)					
	Sorghum	Tef	Barley	Maize	Wheat	Pulses
Kolla <1500 m asl	56'800	11'360	-	-	-	-
Weyna Dega 1500-2500 m	460'320	109'600	32'880	54'800	27'400	21'920
Dega >2500 m asl	-	-	52'800	-	7'200	16'200
Total	517'120	129'960	85'680	54'800	34'600	38'120

Total production in Merhabete Awraja for a normal rainfall year, classified according to major crops and altitudinal zone (in quintals).

NB: The figures obtained in this Table were cross-checked with consumption needs in order to see whether they represent reasonable estimations. Deducting also 10 % for seed storage and the food consumption per year, the resulting surpluses are about 3 qt of sorghum per family, 1.5 qt of tef, about 70 kg of barley, 20 kg of wheat, and 20 kg of pulses. This seemed to be a fair estimation, considering all taxes and additional expenditures which have to be made by the family. From 300'000 people, the number of families was taken as 60'000. The overall production in a normal year would amount to 851'280 quintals for Merhabete Awraja.

Source: Calculated from Annexes 10 and 11 (Hurni, 1987)



ETHIOPIAMerhabete Integrated Conservation and Development ProgrammePeasant Institutions

	<u>No. of PA's</u>	<u>Total Members</u>	<u>Total S.C.'s</u>				<u>Total Membership</u>	<u>No. of PC's</u>	<u>Total Membership</u>	<u>No. of DAs</u>	<u>Farmer/ DA Ratio</u>	<u>SC's/DA Ratio</u>
			<u>Reg.</u>	<u>Not Reg.</u>	<u>Total</u>	<u>% of Reg.</u>						
<u>Merhabete</u>	170	52,959	2	43	45	4.4	n.a.	7	n.a.	6	8,827	7.5
Weremo and Wajitu	12	2,927	-	4	4	-	n.a.	1	n.a.	-	-	-
Mida	24	7,752	-	7	7	-	n.a.	2	n.a.	-	-	-
Dera	74	22,998	-	16	16	-	n.a.	1	n.a.	4	5,750	4.0
Lay Bet	29	9,249	-	10	10	-	n.a.	-	-	-	-	-
Tach Bet	17	5,552	1	4	5	-	n.a.	-	-	-	-	-
Bitu Belew	14	4,441	1	2	3	-	n.a.	3	n.a.	2	2,221	1.5

Source: MoA Awraja Office, quoted from FAO Investment Centre Report No 27/85 UTF-ETH.

ETHIOPIA  
Merhabete Integrated Conservation and Development Programme  
Development Plan

Existing MoA Staff

Dept. Post (*)	Awraja Office	Lay Bet Wereda	Tach Bet Wereda	Dera Wereda	Weremo W. Wereda	Bitabilew Wereda	Mida Wereda
0 Head	1	1		1	1	1	1
Head of adm.	1						
Head of comm.	1						
Prod. & pol. c.	1						
Cashier/clerk	2	1	1	1		1	1
Purch./store	3	1	1	1	1	1	1
Archives	1						
Mess./clean.	4						
Guard	3	4	3	2	1	1	1
Driver	3						
0 Dev. Agent				3		1	1
Home Agent (f)			1				
1							
2 Ass. Vet.	2						
Anim. impr. j.e.	1						
Hide & skin	1		1	1			
Vaccinator	1		1	2	1	1	2
3 Agronomist	1	1					
Coop. organ.	1	1	1	1	1	1	1
4 State forestry	1						
Comm. forestry	1	1		1	1		1
Worker/guard		2					
5 Driver	4						
Typist	1						
6 Forest guard	2	15	14		2	2	2
Total personnel	36	27	23	13	8	9	11

(\*) Key to column 1, Departments:

- 0 General services and administration
- 1 Rural Infrastructure Development Department (no staff assigned so far)
- 2 Animal Resources Development Department
- 3 Cooperative Promotion and Agricultural Development Department
- 4 Natural Resources Conservation and Development Department
- 5 Contract employees
- 6 Temporary workers

Source: Com. Birhanu Yalew, Head MoA, Alem Ketema, 25-9-87



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MoA Awraja Office Facilities and Equipment in Alem Ketema

<u>Item (Unit)</u>	<u>Quantity</u>	<u>Remarks</u>
Rooms at Awraja Office (No)	12	Building in fair conditions.
Desks at Awraja Office (No)	27	There are on average more than 2 desks per room.
Functioning typewriters at Awraja Office (No)	1	
Functioning adding machines at Awraja Office (No)	3	
Functioning duplicators at Awraja Office (No)	1	
Functioning vehicles (No)		
- 4WD's	3	
- Motorcycles	n.a.	
Stores (m tons)		
- Inputs	1,000	Location: Alem Ketema
- Grains for FFW)		

Source: From FAO Investment Centre Report No. 27/85 UTF-ETH

ETHIOPIA

Merhabete Integrated Conservation  
and Development Programme

Inputs Distribution in Merhabete

<u>Year</u>	<u>Fertilizer 1/</u> (qt)	<u>Pesticides</u>	
		<u>Dust Form 2/</u> (kg)	<u>Liquid Form</u> (lt)
1979/80	164.00	-	-
1980/81	65.00	5,430	-
1981/82	232.00	4,394	101.0
1982/83	70.00	-	-
1983/84	288.00	1,312	48.8
Yearly Average	163.80	3,712	74.9

---

1/ Mainly DAP ( $\approx$  90%) and Urea ( $\approx$  10%).

2/ Lindane and DDT.

Source: MoA Awraja Office, quoted from FAO Investment Centre  
 Report No 27/85 UTF-ETH.



ETHIOPIA

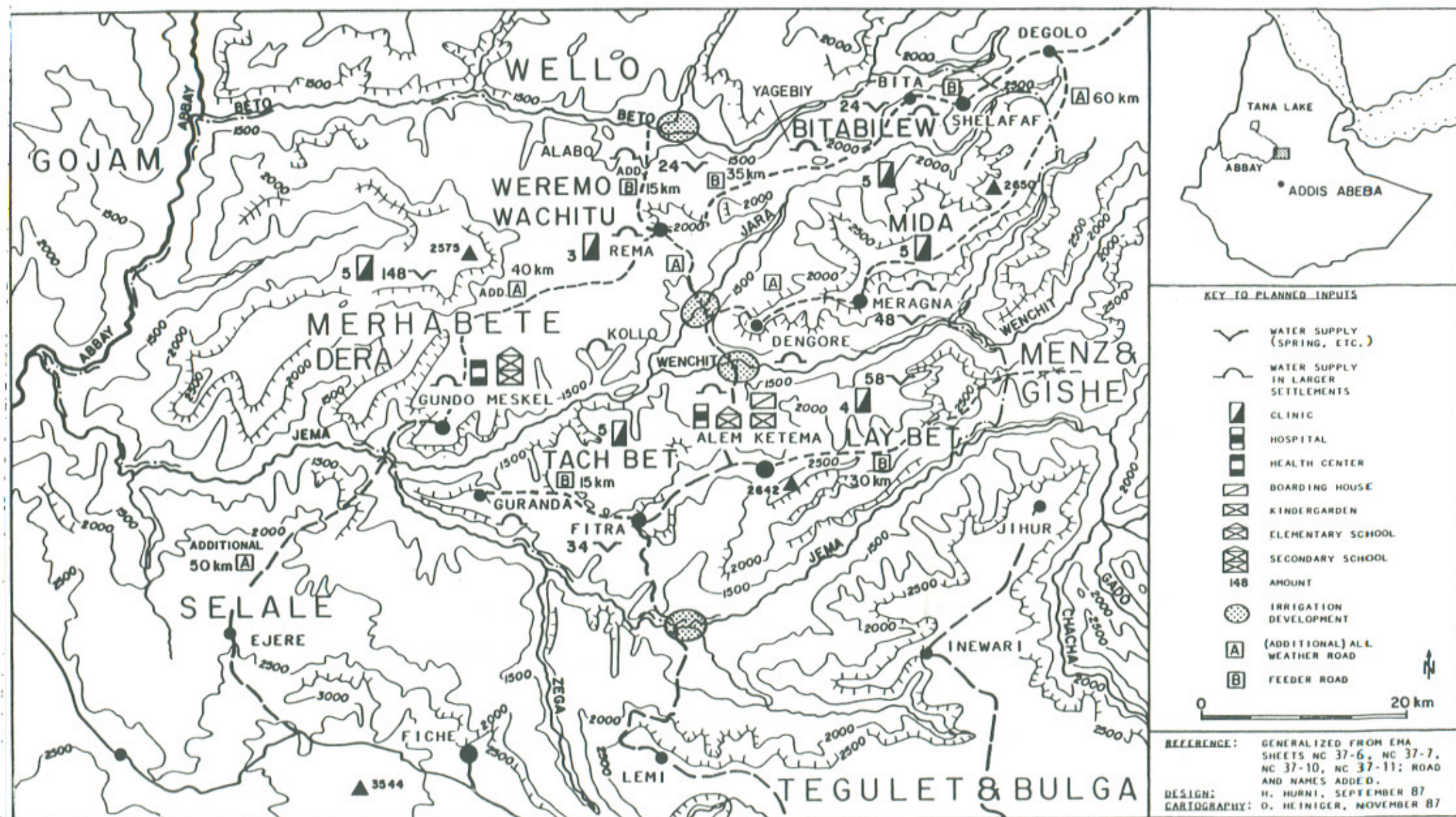
Merhabete Integrated Conservation  
and Development Programme

Soil and Water Conservation Achievements

<u>Type of Activity</u> <u>(Unit)</u>	<u>Merhabete</u> <u>(1978/79-1983/84)</u>
Soil bunds (km)	1,974.5
Hillside terracing (km)	190.0
Check dam construction (km)	49.0
Check dam maintenance (km)	-
Pond construction (No)	10.0
Dam construction (No)	-
Spring Development (No)	414.0
Stream diversion (No)	33.0
Canals/diversion (km)	-
Irrigated land (ha)	575.0
Nurseries (No)	1.0
Seedling production (No)	4,708,576.0
Pitting and repitting (No)	-
Seedling Planting (No)	4,588,908.0
Hillside closure (ha)	179.0
Road construction (km)	30.5
Road maintenance (km)	589.5
Farmers training in soil and water conservation (No)	689.0

Source: MoA Awraja Offices, quoted from FAO Investment Centre Report No 27/85 UTF-ETH.

# MERHABETE: 5-YEAR DEVELOPMENT PLAN 1986-1990 (PLUS ADDITIONAL ROADS)





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Development Plan

Bitabilew Wereda 5-year Development Plan 1979-1983 EC (1986-1990)

Received from Com. Col. Mekurya Haile, Merhabete Awraja Administrator,  
Alem Ketema, 25-9-87

Translated and regrouped by Hans Hurni, 26-9-87

Item No.	Wereda	Project type	Priority	No of Beneficiaries		Site
				PA	People	
1	Mida-Bitabilew	All weather road (part)	1.	170	270'000	from Jara River to Shelafef town
	Weremo-Bitabilew	Feeder Road 20 km (part)	3.	12	11'000	from Rema town to Shilafef
2	Bitabilew	Deep water well	1.	2	2'870	Bitu town
	Bitabilew	Deep water well	1.	2	1'200	Yagobiya village
	Bitabilew	Spring development	2.	14	21'000	2 per PA
3	Bitabilew	5 clinics	2.			
4	Bitabilew	Tree planting	1.	14	19'000	360 ha
	Bitabilew	Terraces on cult. land	2.	14	19'000	2040 ha
7	Bitabilew	Sheep development	1.	14	4'000	Libanos / Yedo / Murasu / Bilew
	Bitabilew	Cattle development	1.	14	2'000	8 PA's in Dega
8	Bitabilew	Provision of oxen	1.	4	300	4 PA's

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Weremo Wachitu Wereda 5-year Development Plan 1979-1983 EC (1986-1990)

Received from Com. Col. Mekurya Haile, Merhabete Awraja Administrator,  
Alem Ketema, 25-9-87

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Item No.	Wereda	Project type	Priority	No of Beneficiaries		Site
				PA	People	
1	Weremo W.	all weather road	2.	170	270'000	from Jara river to Rema town
2	Weremo W.	Deep water well	1.	2	1'800	Rema Wereda capital
	Weremo W.	Deep water well	1.	2	1'200	Alabo village
	Weremo W.	3 clinics	2.			
	Weremo W.	Spring development	2.	12	18'000	2 per PA
4	Weremo W.	Tree planting	1.	12	15'000	600 ha
	Weremo W.	Terraces on cult. land	2.	12	15'000	4200 ha
6	Weremo W.	River diversion for irrigation	1.		600	Jara and Beto rivers
8	Weremo W.	Provision of oxen	1.	12	750	12 PA's



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Mida Wereda 5-year Development Plan 1979-1983 EC (1986-1990)

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Alem Ketema, 25-9-87

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Item No.	Wereda	Project type	Priority	No of Beneficiaries		Site
				PA	People	
1	Mida-Bitabilew	All weather road (part)	1.	170	270'000	from Jara River to Shelafe town
2	Mida	Deep water well	1.	2	2'000	Meragna Wereda cap.
	Mida	Deep water well	1.	2	4'472	Dengore village
	Mida	Spring development	2.	24	36'000	2 per PA
3	Mida	5 clinics	2.			
4	Mida	Tree planting	1.	24	30'000	480 ha
	Mida	Terraces on cult. land	2.	24	30'000	3360 ha
6	Mida	River diversion for irrigation	1.		700	Jara and Wenchit rivers
7	Mida	Sheep development	1.	24	5'000	Sorch / Ardawayo
	Mida	Cattle development	1.	24	2'500	8 PA's in Dega

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Lay Bet Wereda 5-year Development Plan 1979-1983 EC (1986-1990)

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Alem Ketema, 25-9-87

Translated and regrouped by Hans Hurni, 26-9-87

Item No.	Wereda	Project type	Priority	No of PA	Beneficiaries People	Site
1	Lay Bet	Feeder road 30 km	3.	8	11'550	from Alem Ketema to Kolash village
	Lay Bet	Spring development	2.	29	43'000	2 per PA
3	Lay Bet	Hospital	1.	170	270'000	Alem Ketema
	Lay Bet	4 clinics	2.			
	Lay Bet	Spring diversion for drinking water	1.	1	5'000	from Sibi Washa to Alem Ketema
4	Lay Bet	Tree planting	1.	29	30'000	420 ha
	Lay Bet	Terraces on cult. land	2.	29	30'000	2380 ha
5	Lay Bet	Kindergarden	1.	1	5'000	500 children
6	Lay Bet	River diversion for irrigation	1.		700	Wenchitand Jema rivers
9	Lay Bet	Elementary School	1.	29	1' 000	for Alem Ketema
	Lay Bet	Boarding House	2.		500	for Alem Ketetma



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Tach Bet Wereda 5-year Development Plan 1979-1983 EC (1986-1990)

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Alem Ketema, 25-9-87

Translated and regrouped by Hans Hurni, 26-9-87

Item No.	Wereda	Project type	Priority	No of Beneficiaries		Site
				PA	People	
1	Tach Bet	Feeder Road 15 km	3.	6	10'000	from Fitra town to Guranda village
2	Tach Bet	Deep water well	1.	2	1'500	Guranda village
	Tach Bet	Spring development	2.	17	25'000	2 per PA
3	Tach Bet	5 clinics	2.			
4	Tach Bet	Tree planting	1.	17	27'000	300 ha
	Tach Bet	Terraces on cult. land	2.	17	27'000	1620 ha

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Dera Wereda 5-year Development Plan 1979-1983 EC (1986-1990)

Received from Com. Col. Mekurya Haile, Merhabete Awraja Administrator,  
Alem Ketema, 25-9-87

Translated and regrouped by Hans Hurni, 26-9-87

Item	Wereda No.	Project type	Priority	No of Beneficiaries		Site
				PA	People	
2	Dera	Deep water well	1.	2	3'257	Gundo town
	Dera	Deep water well	1.	2	2'000	Kollo village
	Dera	Spring development	2.	74	111'000	2 per PA
3	Dera	Health center	1.	74	60'000	Gundo Meskel W. cp.
	Dera	5 clinics	2.			
4	Dera	Tree planting	1.	74	40'000	900 ha
	Dera	Terraces on cult. land	2.	74	40'000	3900 ha
7	Dera	Sheep development	1.	74	5'000	Adea / Zon
	Dera	Cattle development	1.	74	3'000	14 PA's in Dega
8	Dera	Provision of oxen	1.	4	300	4 PA's
9	Dera	Secondary school	1.		2'000	for Werema / Dera



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Merhabete Integrated Conservation and Development Programme

Programme Cost and Financing Specifications (5-year totals)

(Ethiopian Birr)

	MoA	Donor		Total
		inside Ethiopia	out- side Eth.	
	=====	=====	=====	=====
(1) Community-based Development				
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Community S&W Conservation		1,700,000	300,000	2,000,000
Materials and Tools		500,000	100,000	600,000
Fences (incl. live fences)		500,000	25,000	525,000
Biological technologies		300,000		300,000
Consultancies and surveys		200,000	100,000	300,000
Equipment for Planning		50,000	50,000	100,000
Labour and guarding		100,000		100,000
Seeds and seedlings		50,000	25,000	75,000
Community Afforestation (40 nurseries)		1,500,000	500,000	2,000,000
Labour and guards		1,200,000		1,200,000
Equipment and tools		100,000	300,000	400,000
Seeds		200,000	100,000	300,000
Consultancies			100,000	100,000
Community water supply development		2,000,000	500,000	2,500,000
Materials and transports		1,950,000	450,000	2,400,000
Planning and design		50,000	50,000	100,000
Roof catchments (Cisterns)		400,000	100,000	500,000
Materials and transports		390,000	90,000	480,000
Planning and design		10,000	10,000	20,000
Agricultural inputs	200,000	1,000,000	1,000,000	2,200,000
Artificial fertilizer	200,000		1,000,000	1,200,000
Biological improvements		1,000,000		1,000,000
Rural women support		800,000	200,000	1,000,000
Mills and other equipment		450,000	100,000	550,000
Women programmes		300,000	50,000	350,000
Consultancies		50,000	50,000	100,000
Livestock support		1,100,000	400,000	1,500,000
Medical inputs		300,000	300,000	600,000
Livestock management		700,000		700,000
Consultancies		100,000	100,000	200,000
(2) Regional Development				
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Clinics (MoPH)		1,000,000	500,000	1,500,000
Construction works		800,000		800,000
Equipment			400,000	400,000
Medicines		200,000	100,000	300,000

Schools (MoE)	400,000	100,000	500,000
Construction works	300,000		300,000
Equipment and tools	50,000	100,000	150,000
Teaching materials	50,000		50,000

Water Supply Systems (NWRC)	800,000	400,000	1,200,000
Construction works and materials	700,000	300,000	1,000,000
Planning and consultancies	100,000	100,000	200,000

## (3) Institution Support

Additional personnel	1,900,000	1,700,000	200,000	3,800,000
45 Assistant DAs and HAs	850,000			850,000
10 DAs	350,000			350,000
12 degree holders	500,000			500,000
11 additional staff	200,000			200,000
12 masons		375,000		375,000
24 assistant masons		500,000		500,000
6 construction supervisors		150,000		150,000
2 surveyors		50,000		50,000
4 assistant constr. superv.		75,000		75,000
Personal equipment			200,000	200,000
Basic per diems		550,000		550,000

Houses, Vehicles, Tools	1,500,000	1,300,000		2,800,000
2 residences expatriates	300,000	100,000		400,000
1 office	150,000	50,000		200,000
1 store	50,000	10,000		60,000
1 workshop	50,000	30,000		80,000
1 training centre	200,000	100,000		300,000
Improvement Wereda offices	120,000			120,000
55 DA/HA houses (materials)	550,000	110,000		660,000
Vehicles (8 Toyotas, 1 lorry)	20,000	390,000		410,000
Equipment and materials (tents, tools, soil lab kit, workshop, etc.)	60,000	510,000		570,000

Running Costs	400,000	1,700,000	300,000	2,400,000
Vehicles	100,000	700,000	100,000	900,000
Travels	100,000	250,000	100,000	450,000
Per diems	100,000	450,000	100,000	650,000
Administration	100,000	300,000		400,000

Training and Education	1,500,000	200,000		1,700,000
55 DAs and HAs (12 months)	350,000			350,000
850 farmers (1 month)	350,000			350,000
100 MoA staff (2 months)	150,000			150,000
29 local fellowships	200,000			200,000
Foreign visits		100,000		100,000
Country visits	100,000			100,000
Teachers and instructors	150,000	100,000		250,000
Administration training centre	200,000			200,000

Expatriates (2) and MPCO	500,000	900,000		1,400,000
2 experts	100,000	800,000		900,000
MPCO staff	300,000			300,000
Administrative costs	100,000	100,000		200,000

## (4) Monitoring and Evaluation (M&amp;E)

Internal M&E	180,000	20,000		200,000
External M&E	200,000	600,000		800,000

Total Programme Costs	2,500,000	17,980,000	7,520,000	28,000,000
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